PULP & PAPER

NOVEMBER 1947
Vol. 21 No. 12
Member Audit Bureau of Circulations
Contents copyrighted, 1947

The Production and Management Journal Covering North America's Wood Pulp, Paper, Paperboard and Cellulose Industries
by MILLER FREEMAN PUBLICATIONS, INC.

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NEW YORK (17)—Nard Jones, Associate Editor; M. F. Bosworth, Business Representative; Virginia Meenagh, Readers and Advertisers Service, 370 Lexington Ave. (120 E. 41st St.) Tel. Murray Hill 3-9295
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SUBSCRIPTION—For 1 Yr., inc. North American Review Number—$3 in U. S. and Canada, $4 in other countries. For 2 Yrs., $5 in U. S. and Canada; $7 in other countries.

"The Cellulose Age"

EDITORIALS

An Insult to Canada

THE Hearst newspapers, in an editorial published during the past month, lambasts the U. S. department of justice for instituting an "investigation" of the Canadian newsprint industry under American anti-trust laws.

This defense of Canada's No. 1 industry by the Hearst papers will cause a few old timers to chuckle, for they will remember when the Hearst organization was not so concerned over the welfare of the newsprint industry and, in fact, pursued destructive tactics against it which helped to bring about the critical situation which exists today.

But, of course, this action of the department of justice is an awkward, bungling move that can do no possible good and only harm. Many months ago—in these coulmns—we even questioned the ethics of a congressional committee touring Canada on an "investigation." This department of justice project is even worse because it takes on the character of a prosecution and not just an investigation. It has angered Canadians because it is usurping their sovereign rights. Our very friendly relations with Canada are being needlessly upset. Lawsuits simply won't increase newsprint production—only a favorable market will.

But one point that the Hearst papers did not bring out. There is even a political tinge to this department of justice action, due to the pressure of American newspaper publishers upon the U. S. government and congressmen to intervene. This pressure isn't wasted on politicians who fear newspaper disfavor.

And, of course, the Hearst editorial couldn't resist again bringing in the "freedom of the press" argument. Newpaper publishers are once again underestimating the intelligence of their readers when they continually talk about newsprint as though it were something "belonging" to freedom of the press instead of an ordinary commodity like wheat and steel, which it is. Most magazine publishers, who are now paying the price and getting paper that used to go to newspapers, deal with these matters in an ordinary business way and never have become outraged or imagined plots against freedom because the paper manufacturers and their employes managed to make money.

Alaska Deserves a Better Break

Probably one of the worst sales jobs in history has been and is being done in the effort of the government and the newspapers to stimulate investment in Alaskan pulp or paper production. It's just too bad. Under the right conditions, such an industry should thrive in Alaska. If it wasn't such a serious matter, it would be fit material for a screaming comedy that would match the "Hucksters."

Consider these paradoxical campaigns, if you will:

The newspapers seek in every way possible to interest capital into an Alaskan venture to make newsprint. But the same newspapers campaign against a fair price for newsprint and the sports editors run wild making demands for what amounts to a "pure" Pacific Ocean to gratify their sportsmen readers (the commercial fishermen themselves, who know Alaska, are not nearly as excited). All of this would scare off Alaska investors, if the government wasn't already doing a good scaring job.

Interior Secretary Krug talks glowingly of the wonderful opportunities for a pulp industry in Alaska. But the ground is cut from under him by Interior Department-instigated Indian claims to timberlands, to the alarm of anyone who would dare to invest in a plant to use this timber. New Indian lawsuits were filed last month. However, these may not seriously menace investors.

But the prize paradox of all is the revival of the scare-propaganda tactics of U. S. Chief Forester Lyle F. Watts in published articles and speeches, attacking private timber operators in America as "destructive cutters" and worse and proposing increased government controls, while some of the men on his own staff are trying to convince private operators that they will be able to run their own business in Alaska.

The relentless, organized, and timed campaign for government control of all timberlands continues. Latest propaganda under the by-line of Chief Forester Watts himself is the scare-heading "We Are Running Out of Wood" in "This Week," which has a circulation of 8,000,000 in 24 newspapers throughout the country.

Leading off as a mild-seeming and apparently reasonable article, the old snapper is in the conclusion, and Chief Forester Watts underlines it for emphasis: "Only by public control can we hope to stop destructive cutting on a nationwide scale." And Mr. Watts makes it clear that he means to include the 4,200,000 small forest owners in U. S. He makes it equally clear that he favors the expansion of "national, state and community forest holdings" and that these should be "taken over in public ownership."

Paper is the most widely-used manufactured commodity in the world.

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FIFTY-NINE MEMBERS of the Michigan Division of the Superintendents Association, at their first meeting in Kalamazoo, this fall, paid tribute to WALTER F. WOLFE, Superintendent of the MacSimBar Paper Co., Ostego, Mich. (second from right in above picture). Mr. Wolfe received a certificate after having completed a term as Chairman of tthe Michigan group, which meets second Thursdays of each month except summer and in January (when a joint affair is held with TAPPI). They meet in the Park American Hotel in Kalamazoo. In the picture (left to right) are: O. W. CALLIGHAN, Secretary-Treasurer of the division and Technical Director of Edgar Bros. Co.; W. F. HATHAWAY; GLENN SUTTON, Sutherland Paper Co. Superintendent and new Fifth Vice President of the Superintendents Association; WILLIAM N. ASTLE, of Michigan Paper Co. of Plainwell and Chairman of the Michigan Division; HAROLD OLSON, Kalamazoo representative of Simonds Saw & Steel Co.; Mr. WOLFE and RAYMOND L. BARTON, Superintendent at Michigan Paper Co. of Plainwell and former National President of the Superintendents.

Personals

MIDDLE WEST

One of our editors on tour this year had an enjoyable visit with executives of the Howard Paper Mills, Inc., in the famous Miami Valley of paper mill fame in Ohio and discovered the Tate family in that region is one that has "made its mark" in the industry.

K. P. Geohegan, vice president and technical director of the company, and William A. Kinney, Production Manager of Pioneer-Flintkote Co., Los Angeles, married Tate sisters who recently had a reunion out in California. Mr. Geohegan, whose duties are broader than even his title indicates, and who does a lot of traveling for his company, couldn't make it that time. He is a veteran national executive committeeman of TAPPI and heads its Graphic Arts committee. His office is at the Howard group's Aetna Mill in Dayton, Ohio.

A brother of the Tate sisters, Harris Tate, is engineer for the three Howard Mills. His office is at the Howard Mill in Urbana, Ohio. He returned about two years ago from service in the U. S. Navy during the war.

MACE V. HARRIS, manager of pulp manufacturing, The Cloquet Paper Co., Cloquet, Minn., traveled the farthest of any of the mill men attending the recent superintendents' N. Y.-Canadian convention in Murray Bay, Que.

GEORGE WILSON MEAD, president of Consolidated Water Power & Paper Co., bought for $15,000 the home of Mrs. Charles G. Witter in Wisconsin Rapids and turned it over to the city for a library.

DR. ALVIN M. BORDERS has joined the staff of the Institute of Paper Chemistry, according to Westbrook Steele, executive director. Dr. Borders, Indiana University, Ph.D., granted in 1937, joined Goodyear Tire & Rubber Co. the same year and was research director of the Synthetic Rubber Group of the company prior to joining the institute.

TONY AGRONIN, who is in charge of engineering for Shartle Brothers, Middletown, O., did some fast moving in late September and early October. He was in Florida in one corner of the country and two weeks later was in Puget Sound country at the other corner, and he made quite a few calls in between, including a jaunt into Michigan. This was his first trip to the Pacific Northwest mills.

EDMOND W. CHASE, a director of Sutherland Paper Co. of Kalamazoo since 1922 died suddenly in September just two days after attending a board meeting.

H. W. SUTER, JR., formerly Cleveland office manager, Champion Paper Company, Hamilton, Ohio, has been appointed general sales manager.

JAMES H. RASMUSSEN has resigned as vice president of United Wallpaper, Inc., Chicago, it is announced by William H. Yates, president.

BLACK-CLAWSON CO. sales staff in Hamilton, Ohio, has been augmented by addition of C. H. (Butch) Butterfield, according to Allan Hyer, vice president and sales manager. Fourth generation member of a family of paper mill operators, Mr. Butterfield comes to Black-Clawson with 28 years' experience in mill operation and engineering. He graduated from University of Cincinnati as a mechanical engineer.

INDUSTRY MEETINGS

National Paper Trade Assn.	Chicago	Oct. 27-29
TAPPI Engineers Fall Meeting	Philadelphia	Nov. 3-5
TAPPI Empire State Section	Glen Falls, N. Y.	Nov. 21
Chicago Professional Paper Group	Chicago	Nov. 17
Supts. Michigan Division	Kalamazoo, Mich.	Nov. 20
Supts. Connecticut Valley Division	Springfield, Mass.	Oct. 25
TAPPI Kalamazoo Valley Section	Kalamazoo, Mich.	Nov. 6
TAPPI Lake States Section	Appleton, Wis.	Nov. 11
TAPPI Pacific Coast Section	Everett, Wash.	Nov. 4
Supts. Pacific Coast Division	Seattle	Dec. 5-6
Envelope Mfgrs. of American	Chicago	Dec. 1-2
National Supts. Convention	New Orleans	May 19-21, 1948
Technical Section, Canadian Ass'n	Vancouver, B. C.	Sept. 4-6, 1948

NEW MILL LOCATIONS

EVADALE, TEXAS, SITE CONSIDERED

Despite the difficulties that might be currently experienced in such a project there is active discussion of new pulp and paper mill locations in several sections in the Southern pine belt that flanks the Gulf of Mexico. The location of any new mill in the South today would hinge on (1) an adequate supply of timber tied exclusively to the mill by fee ownership or contract, (2) water supply, and (3) a location site where the mill's effluent would not create local difficulties.

The Champion Paper and Fibre Co., with headquarters in Hamilton, Ohio, and producing mills at Pasadena, Texas, and Canton, N. C., is giving consideration to the construction of another paper mill in East Texas along the Neches River. Consideration is being given to a site at Evandale, Texas, although commitment of purchase has not been effected.

The company reiently purchased 10,000 acres of forest land in Jasper and Hardin counties (Texas) to add to an extensive forest land holding in Newton county, not too distant from Evandale. The availability of water supply at Evadale is being studied, as well as at other sites.

It is understood that the expanded mill capacity at Pasadena will absorb the pulpwood supply within a reasonable distance and that further enlargement of mill production will come at a new location adjacent to the forest areas referred to.

The Evadale location has been considered as a possible paper mill site over a number of years, with various companies studying its possibilities. There was also talk of the Henry Kaiser interests building a wall board mill there. The site is that of a "cut out" sawmill of the Kirby Lumber Corp., Houston, Texas, owners of approximately a half-million acres of forest land under reforestation management. The company is perhaps the largest lumber producer in the Southern pine industry.

The water situation, considered as having been a bar to paper mill operation in the immediate area, may be solved through the construction of a $6,431,000 dam at Town Bluff, on the Neches River, between Jasper and Woodville (Texas). Ground breaking ceremonies were held on September 12, and represented the initiation of a multiple dam program for the Angelina and Neches Rivers under supervision of the N. S. Army Corps of Engineers.

In Southern Georgia, several sites have been under consideration for possible paper mills for many years. Of course, there is the Bainbridge, Ga., project, reported on page 20 of our May 1947 **PULP & PAPER**, which would utilize an airfield and timber contracts with Leo Stack, president of Magnolia Timber & Development Co., New Orleans, conducting negotiations. Valdosta, Ga., talked of some time ago as a possible mill site, is being seriously considered again. Here, the old difference between the naval stores industry timber owners and paper mill interests are on the wane. The supply of pulpwood here would be supplied by contract by large owners. The price of pulpwood is a factor since large forest land owners are holding for a good profit. A projected mill site east of Valdosta would include a privately-owned lake that spills ultimately into Okefenokee swamp.

LEO L. STACK (left), of New Orleans, who is actively interested in timber contracts for a possible pulp mill at Bainbridge, Ga., and R. E. HARTMAN (right), a pioneer of the Southern industry, president of Mobile Paper Co., which recently made a bid for a possible site at Carabelle, Fla. However, most of this latter site has been sold by the War Assets Administration to a ceramics industry.

The selection of a Valdosta site would presumably preclude the establishment of a mill at Thomasville, 46 miles to the west, particularly since this community is only 41 miles east of Bainbridge.

Two years ago there was much talk of a mill at Albany, Ga., and it is understood that only the disinterest of local leaders blocked the project. Albany is in the Georgia pecan belt, has a substantial agricultural background, has no stranded labor problem. The Albany Chamber of Commerce appointed a committee in Dec., 1945, to visit other paper mill locations. Local interests subsequently gave the project a "thumbs down."

Recently, the Mobile Paper Mill Co. (Mobile, Ala.) made a bid of $163,000 for part of Camp Gordon Johnston including the 55-mile railroad connecting the site at Carabelle, Fla., with Tallahassee, Fla. Sale of the properties, which would have included residential quarters as well as water facilities, etc., was up to the War Assets Administration. It was announced that a $3,000,00 kraft paper mill having a 350-man payroll of $1,690,000 annual value would have resulted.

The camp was subsequently announced as sold by WAA to Grier A. Quay, a bank president, and John Blosco, both of East Palestine, Ohio, for $441,338, for a multiple industry project to include a ceramics enterprise. The camp area was given as 803 acres with 775 acres listed as sold.

R. E. Hartman, president of Mobile Paper Mill Co., stated that he had not conferred with the purchasers about the site. The company is now engaged in an expansion program.

Camp Gordon Johnston is near Carabelle, Fla., which is 36 miles east from Port St. Joe along the coast. It was used during war for amphibous training.

Proponents of a mill at Lake Charles, in southwest Louisiana are understood to have received discouragement. In a meeting with forest land owners and other interests, they found other mills had established themselves as pulp wood buyers. Additionally, rice growers, who use much water for irrigation intimated there might be trouble on that score.

North of Lake Charles, the erection of a newsprint mill proposed by E. A. Charlton, New York consulting engineer, met opposition from other forest product industries in a move to sew up the yield of the national forest for a Leesville, La., site. It is believed that ultimately there will be a new mill in the Lake Charles-Beaumont (Texas)-Leesville triangle, making either wallboard or paper.

Since the newsprint mill at the Childersburg arsenal (Talladega, Ala.) has been a project in strong hands from the beginning, the announcement of Coosa River Newsprint Co. of building plans had been taken into consideration in location strategy.

Champion Tells Employes Of Executive Problems

F. C. GERHART, advertising manager of the Champion Paper & Fibre Company, Tamilton, Ohio, invites attention to its "Story of American Business Management" distributed to both stockholders and employees in a separate report.

"The reason for issuing separate reports," says Mr. Gerhart, "is based on differences in primary interests in the two groups. While employes are familiar with manufacturing processes, they sometimes know comparatively little about management problems. We believe that the theme has never before been treated in just this way in an employe report."

The Champion report demonstrates to employes the problems facing management, and illustrates the place of Champion executives in the American business scene."

ALASKA PULP MILL

Now Likely—Newsprint Doubtful

Southeastern Alaska now can look forward to a high quality pulp industry—but, for the present, neither to a paper nor a newsprint industry.

Developments have been popping thick and fast as this issue went to press, but it now seems most likely that the dissolving pulp and high alpha and quality paper pulp interests (two or three groups may make bids) have completely crowded out any and all newsprint "money" that might have taken a hand in the auction sales of U. S. Forest Service timber in Alaska on Dec. 15 (when the so-called Ketchikan unit goes on the block) and even on Feb. 18 (when the Petersburg-Thomas Bay unit is offered the highest bidder). But there's time for the Feb. 18 picture to change.

Experienced operators in this industry and others who may have shares in the entirely new Alaskan industry now are pretty well convinced that the high quality spruce and hemlock of Alaska is going to bring more satisfying return to investors, and therefore to the territory itself and its citizens, if it is used to makehighest quality pulps for plastics, rayon or better paper grades instead of newsprint.

Less labor—a big cost item—and less expensive equipment in some departments, would be needed for pulp. Yet strong demand for pulp at high level prices and the prospect of this demand continuing for a long time to come, will mean that the return on investment would be considerably more gratifying. By merely making pulp in Alaska, the rigid Forest Service stipulation that Alaskan timber must be processed in the territory before export would be satisfied. It could be bleached and processed into book or fine papers or plastics or rayon in plants in the United States. The return on investment for pulp is substantially greater than for newsprint—paradoxical as this seems.

However, as this issue went to press, it was pretty certain that the Dec. 15 auction would be carried through to an award. The place: The U. S. Chief Forester's office in the South Agricultural Bldg., Washington, D. C. Although preliminary information and bids are requested beforehand, it will be a typical oral auction sale and before the sun sets that day on the Potomac, the 1,500 million cubic feet of timber in the Ketchikan area will, in effect, pass to the hands of private ownership.

A second auction is scheduled for Feb. 18. This will be the sale of the Petersburg unit, postponed from Oct. 1. Some newspaper publishers have been interested in this sale. It is understood they are withdrawing but others, with whom they were associated, are still actively interested and now are shaping up their bid for a pulp operation instead. The Forest Service explained the postponment was to "permit parties who have already expressed a desire to bid to clarify their qualifications, as well as afford an opportunity for additional concerns to meet the bidding qualifications." Bidders must show availability of at least $8,000,000 as a starter on the construction program.

NEW FOREST SERVICE PLAN FOR ALASKA

A map published on the opposite page, drawn by PULP & PAPER'S artist, shows the projected sites for four mills in Alaska and the timber areas to support each one. The actual timber up for auction on Dec. 15 for the Ketchikan mill is not all of the timber in that area. The timber for sale is only the shaded area, which would be ample for one mill for 50 years. But the entire Ketchikan area would support 1200 tons daily production — which could be manufactured at one mill site or two sites.

Here is data on the four projected mill sites — as now projected:

Name of Unit—	Proposed Mill Site	Connection with City	Daily Tonnage of Pulp Possible on Sustained Yield Basis	Total Potential Nearby Power Resources (daily)	Date of Auction Sale in Wash., D.C. (for only part of timber in unit)
Ketchikan	6 mi. N.W. of Ketchikan	Forest Highway	1200	70,000 hp.	December 15
Petersburg	6 mi. N.E. of Petersburg, in or outside Thomas Bay	By boat — New town required	700	55,000 hp.	February 18
Sitka	5 mi. S.E. of Sitka	Beach Road	300	17,000 hp.	Not Set
Juneau	3½ mi. south of Juneau	Highway	800	100,000 hp.	Not Set

New Indian Claims

In early October a lawsuit was started by the representatives of two Alaska Indian tribes to halt what attorneys described as "exploitation" of their so-called aboriginal homes by the white man's industries.

Congressman Henry Jackson of Washington, informally commenting on the matter, told **PULP & PAPER** that the joint resolution passed by Congress last August and signed by President Truman, quieting title to timber which may be purchased by pulp or paper industries, would supercede these new Indian claims. In other words, he felt there could be no claim against the private investors who might launch pulp or paper industries, although there might be against the government.

A prominent spokesman for the fisheries industry, which might also be affected said that he thought this new Indian lawsuit was instigated in an effort to embarrass the government effort to introduce new industries in Alaska. But Congressman Jackson did not think the claims would involve much of the timberlands in any case.

The Tlingit and Haida tribes, through an attorney, James E. Curry, of Washington, D. C., contended the government had failed to enforce laws forbidding outsiders to tresspass on the ancestrial Indian lands and strip them of resources and held that the government was obligated under an old treaty to protect these Indian "rights." This suit against the government was of a nature authorized by an act of Congress back in 1935.

But under the joint resolution of last August, proceeds of Alaska timber sales will be held in escrow to pay off any Indian claims if and when these may be upheld either in court or in Congress. Some Indian claims already had been recognized in an action and hearing which were sponsored by ex-Interior Secretary Ickes.

Joseph Flackne, of the Alaska division of Interior, had just returned from a trip to the north when the new lawsuit was filed in October. He was asked by **PULP & PAPER** to pursue this higher up, particularly as to whether the suit might have been engendered by Interior in order to settle the Indian question once and for all. Only result of this request was a statement from Felix S. Cohen, acting solicitor for Interior, to the effect that the suit had been filed "pursuant to the Act of Congress authorizing the suit" and that further information would have to come from Mr. Curry, attorney for the two tribes. Secretary Krug was not in Washington as this issue went to press and could not be reached.

Unless this matter of suing Indians and their lawyers is settled, the continued

publicity and attention given to these recently-discovered Indian "rights" are tending to disturb the efforts of the Forest Service to allay fears among prospective investors in Alaskan pulp manufacturing.

Fish & Wildlife Service Interested

Another matter of possible serious consequence was possible actions by the Fish & Wildlife Service of the Department of Interior which has absolute power over use of inland waters and spawning areas of fish for mill effluent. But despite some comments published in the press by sports editors and others that would seem to indicate no dumping anywhere would be permitted, **PULP & PAPER** was reliably informed that cooler heads in the Fish & Wildlife Service were taking a reasonable view and would make no demands that were not in conformity with common practice at the modern pulp mills in the United States.

George Chidester, head of pulp and paper work at the U. S. Forest Products Laboratory, in Madison, Wis., and Dr. Edward G. Locke, of the U. S. Forest Experiment Station in Portland, Ore., made a trip to Alaska and looked over the waterways situation as it might be affected by effluents of mills. The extent of the reports they might make on this was unknown as their survey was apparently very informal.

However, from observations made in Alaska by others, it can be assumed that they did learn that where the prospective mill would be built near Ketchikan the tides race through the Tongass Narrows at speeds of a mile an hour and water depths are 200 to 250 feet.

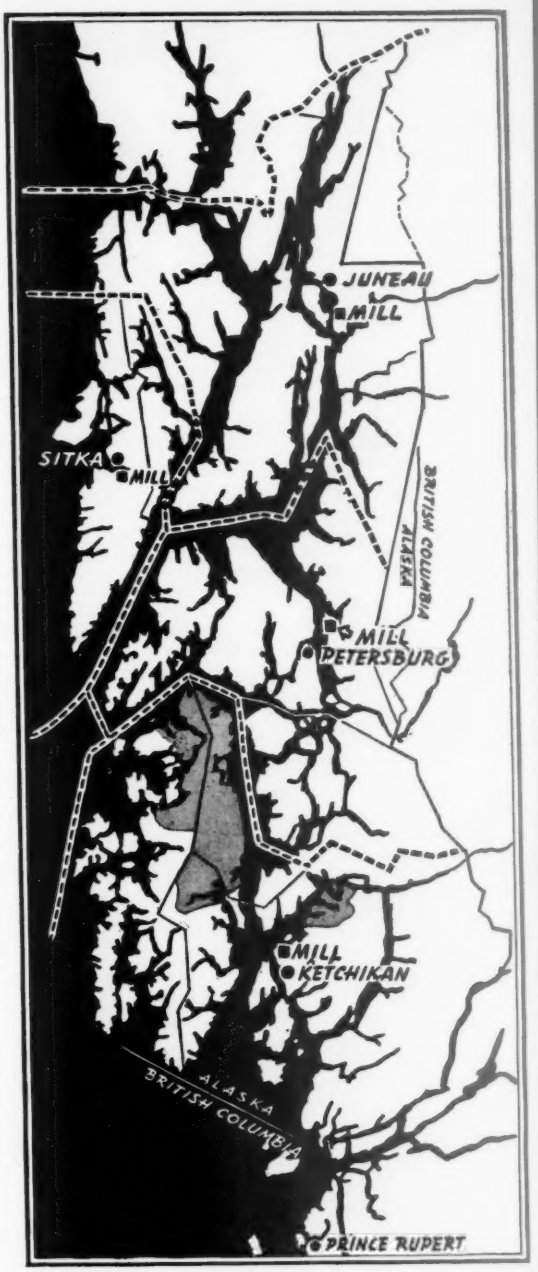
They would also have learned that the projected mill in the Petersburg or Thomas Bay would also be "safe" from the viewpoints of fish or fishermen. There are two proposals—to build the mill inside Thomas Bay or just outside the bay across from Petersburg. In the former case, the bay of 31 square miles has depths of up to 600 feet and though the mouth is comparatively shallow, the tide flow is strong. Outside on the open waterway of Frederick Sound depths of up to 900 feet are close to shore.

It may not generally be known in the pulp and paper industry in the states and Canada that Alaska has some of the deepest inland waterways in the world and that 15-ft. tides are common. And as it is likely a sulfite mill would be built in Alaska, the salt waters of Alaska would quickly dissipate any possible effect on fish.

FRAN HEINTZLEMAN, regional forester for Alaska, and Ira Mason, head of the timber management section of the U. S. Forest Service, spoke before members of the Association of Pulp Consumers in their new offices at 385 Madison, New York, recently. They outlined the current developments on the projected mills for Alaska at the invitation of Karl A. Clauson, secretary.

R. P. KERNAN, president of Donnaconna Paper Company, Quebec, announces the purchase with Anglo-Canadian Pulp & Paper Mills, of the Brown Corporation's Bersimis timberlands in the province of Quebec.

THE U. S. FOREST SERVICE NOW PLANS FOUR PULP MILLS IN ALASKA. The map (right) by our artist, shows the sites proposed for the four mills. Each site could draw upon timber in its area, the boundaries of areas being shown by dotted lines.
Actually, however, only the shaded area in the Ketchikan unit is up for sale by autcion on Dec. 15. The entire Ketchikan would support pulp production of 1200 tons a ton perpetually, according to the Forest Service, but this could be produced in more than one mill or at more than one site. The shaded area is designed for 50 years' production at a mill of half that size.
Similarly, the amount of timber up for sale in the Petersburg unit on Feb. 18 is only a portion of the timber in that unit. The entire Petersburg unit would support 700 tons perpetual daily production, the Forest Service figures, which could be made at one or two mills eventually. Bids have not yet been asked on the Juneau unit, to support 800 tons daily output, nor on the Sitka unit, to support a 300-ton mill.
A table on the opposite page shows data on each of the four divisions.



THESE GENTLEMEN FIGURED IN IMPORTANT INDUSTRY NEWS last month (left to right): **T. NOEL BLAND**, vice President, Fibreboard Products Inc., San Francisco, who has taken over as Vice President and General Manager of these far-flung operations, relieving President D. H. Patterson Jr. of the latter duties. Mr. Patterson continues on the executive committee;

WILLIAM R. CAHILL, appointed Director of Personnel Administration for Nekoosa-Edwards Paper Co., Port Edwards, Wis. During war he handled mill priorities and government work;

CHARLES K. FLINT, General Manager of Kodak Park paper, film and chemicals plant of Eastman Kodak Co., in Rochester, N. Y.;

DR. EMMETT K. CARVER, who was appointed to new position of Technical Assistant to Mr. Flint;

DR. CHARLES R. FORDYCE, promoted to Superintendent of Department of Manufacturing Experiments at Eastman Kodak paper and chemicals plant;

EDWARD McSWEENEY, recently elected Treasurer of Perkins-Goodwin Co., New York. He is a native New Yorker, graduate of M. I. T. in mechanical engineering and formerly headed his own marketing and management consulting firm for paper and publishing industries;

H. C. WRIGHT, who returned to Canada after several months as Technical Director of pulp mill in Monterey, Mexico — the Empaques de Caiton Titan SA, where he said experiments on making pulp from bamboo have been suspended. He has gone to Minas Basin Pulp & Power Co., of Hantsport, Nova Scotia.

Park Avenue Staff Tours

MECHANICSVILLE MILL

A few months ago Miss Hilda Bryan, an employe in the New York Park Avenue office of West Virginia Pulp and Paper Company, laughingly remarked to an executive that she had never in her life seen a paper mill in operation.

"We'll see if we can't do something about that," the executive told Miss Bryan.

Out of this chance conversation grew an idea that developed into an unusually successful employe relations projecct.

Miss Bryan's remark was given more than passing attention. If Miss Bryan, who first went to work for the company in 1918, had never been inside a paper mill, there must be a large percentage of employes in the New Yory office who had never had such an opportunity.

So the industrial relations department was asked to investigate the possibility of a plant tour for employes in the New York office—a visit that would familiarize office workers with the operations of a paper mill and give them a better conception of the scope of the industry in which they work.

The idea "took" and soon arrangements were being made.

The plant chosen for the visit was at Mechanicsville, N. Y., where 1,300 persons are employed and about 80,000 tons of paper are producced annually. The Mechanicsville plant was chosen because of its proximity to New York City and because of the diversity of its operations.

Resident Manager Thomas H. Stirling and Fred A. Coe, assistant resident manager of the Mechanicsville plant, were enthusiastic about the proposal.

The New York office made arrange-

PULP & PAPER took these pictures on West Virginia Pulp & Paper Co.'s Park Avenue-to-Mechanicsville outing:
Upper left: The then Resident Manager THOMAS H. STIRLING (left), since retired, receives thanks of ED HYLAN, of New York traffic office of company for hospitality as latter boards train back to Manhattan.
Lower left: DICK WRIGHT, from the mill, plays piano. Among singers is DOROTHY NOVY (in sun glasses) is from New York office.
Upper right: A wood hooker holds center of stage as New York office visitors watch pulpwood tumble into big chipper.
Lower right: Among those watching wood in sluice-way are William Merrilees, Jr., Gene Ward, Martha Beggs, Margaret Curran and Reina Fredericks. With peavey is Hassan Hamid.

OUR COVER PICTURE

. . . shows the Mechanicsville, N. Y., soda and sulfite pulp and paper mill of West Virginia Pulp & Paper Co. This mill, on the Hudson River, has producing capacity for 130 tons bleached sulfite and 50 tons bleached soda pulp which is made into supercalendered book, lithograph, bond, writing and similar papers on six Fourdriniers.

In the cover picture, the high white soda recovery plant stack is plainly visible, also boiler house towers. The pulp mills are on the left and paper mill on the right. Locks can be seen across the river, and also the dam. A railroad bridge is in the distance.

Mechanicsville is one of the most important railroad junctions on the country, for switching and making up trains going into and out of New England from the west.

This mill is also distinguished in the industry for being a pioneer in the production of pulp mill by-products.

ments for train accommodations for the 160-mile journey and all other arrangements were to be handled by Mr. Stirling and his aids. At Mechanicsville committees were appointed and plans were laid to entertain and instruct the guests from the New York office.

It was decided that two trips would be staged and that the visits would be spaced two weeks apart. The programs for both days were identical.

The visitors arrived in Mechanicsville early in the morning after a night train trip from New York. They were entertained at breakfast and then taken to the plant. The first event on the schedule was a film on paper making, which set the stage for the plant tour that was to follow. The guests were organized into touring parties and shown around the mill by selected members of the plant technical staff, who explained all operations thoroughly.

After a morning devoted to seeing the mill in operation, the guests were entertained at a clam steam and get-together

MORE PICTURES AT MECHANICSVILLE:
Top left: FRED COE, the new Manager, and TOM STIRLING (in hat), his predecessor, with their wives seated in front of them. Shortly after this picture was taken Mr. Stirling retired as Resident Manager after 48 years' service.
Top right: Misses TERRY HANRAHAN and MICKEY WIGGER of New York office listen to PETER PRUSO explain screens in bleach plant.
Second row—At left: GEORGE WEBB, N. Y. Engineering Office, and ELEANOR JOHNSON, Receptionist at Headquarters, come back for second helping of clams. At right: FRED COE, enjoying food prepared by his staff.
Third row—At left: Two of older employes at Mechanicsville, known to friends as "Mutt and Jeff," are TOM WALKER and OLIVER CARLTON. At right: ARTHUR DORLAND, veteran tool repair man, now retired.
Bottom view: DICK LEVINUS, from mill, with JEAN GARLAND, from New York, and Mrs. COE.

on the plant golf course. Employees of the Mechanicville plant helped to cook and serve the food. The visitors were entertained according to their individual desires during the afternoon; some played golf, some went sight-seeing and others went for a second look at the mill operations.

The visitors left Mechanicville in time to reach their homes that night.

The first trip drew 45 employes and created so much favorable comment around the New York office that 75 responded to the invitation for the second visit. The 120 employes who toured the mill represent almost 100% of the employes in the New York office who do not visit the mills in connection with their jobs. A survey showed that more than 90% of those who made the trips never before had seen a paper mill operation.

No better appraisal of the value of the plant visit as an employe relations device can be obtained than through the comments of the participants.

"I have worked for this company for a good many years," said one veteran stenographer, "but I never dreamed what a complex thing a paper mill can be. Seeing the plant has made my work much more interesting. I would like to see more."

An order clerk put it this way: "Before an order was just another order to me. Now I can visualize what it means in manpower, work and planning. The visit has changed my whole conception of my job."

"The trip not only was highly instructive," said the secretary of a company official, "but it allowed me to get better acquainted with people in our office. I think it was a wonderful idea."

West Virginia Employes Retired As of Oct. 1

Retirement came Oct. 1 to 30 veteran employes of the West Virginia Pulp & Paper Co., among them Thomas H. Stirling, for 40 years resident manager of the Mechanicville, N. Y., plant and a member of the board of directors since 1930. Also retired were Charles A. Cass, secretary since 1909 and member of the board of directors since 1927, and Henry L. Condit, assistant secretary since 1915. Among those retired in the New York office were: Robert H. Buckie, Erik Hammarstrom, Leo T. Kuhn, Isabelle Ketcham, John R. Mathews, Olive Sands, and Axel Westerdahl.

Retirements in the mills included:

At Mechanicville: Oliver W. Carlton, Ralph N. Clarke, John Tweedie, Thomas I. Walker, and Charles M. Wetherbee.

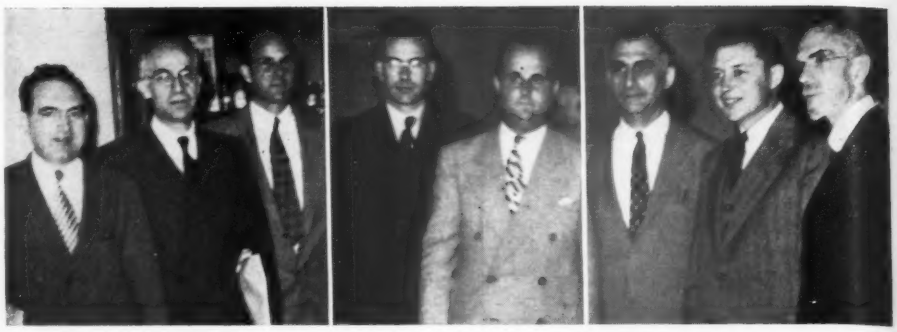
At Luke, Md.: William Grimm, J. Grant Hayden, Thomas T. Holland, Victor S. Kalbaugh, John V. Niland, John O'Brien, James Walker, and Frederick P. Wiseman.

At Williamsburg, Pa.: Archie Gunnett.

At Tyrone, Pa.: R. G. Heyl and Joseph A. Lightner.

At Covington, Va.: William Greig, William R. Kiley, David B. Landis and William M. Skeen.

The average employment period was more than 40 years.



IN STERLING HALL OF CHEMISTRY, Yale University, New Haven, Conn., 75 leading pulp and paper chemists convened on Sept. 19 to hear a program of lignin. Theconference was under auspices of the Northeastern Wood Utilization Council which was organized in 1942 to promote new uses for wood. Above are some leaders at the conference, left to right: DR. ARTHUR POLLACK, West Virginia Pulp & Paper Co., who spoke on "Lignin from Sulfate Pulping"; DR. EDUARD FARBER, Timber Engineering Co., who reviewed recent German work in lignin; MR. LAURANCE RATHBUN, Vice President of the NEWUC; DR. GEORGE TOMLINSON, Howard Smith Paper Co., who talked on "Chemistry and Production of Soda Lignin"; DR. ROBERT ARIES, Director of NEWUC and Polytechnic Institute of Brooklyn; DR. F. E. BRAUNS, Institute of Paper Chemistry, who discussed proven chemistry of lignin; DR. M. BAUM, Marathon Corp., who addressed the group on "Sulfite Liquor Lignin," and E. L. HEERMANCE, Secretary of the NEWUC.

Personals

NORTHEAST

WILLIAM A. FAIRBURN, one of the most prominent figures in wood-using industries, died Oct. 2, at Center Lovell, Me. He was president of Diamond Match Co. since 1915 and was 71. Credited with the invention of the non-poisonous match and a chemical bath to reduce fire hazard from it, both of which he gave gratis to his country, he was also noted as a naval architect and author. He designed on of the first all-steel freighters in the U. S. In 1909 he was invited by Edward R. Stettinius, then president of Diamond Match, to join the company which Mr. Fairburn completely reorganized. During World War I, he discovered three sources of the vital chlorate of potash. Surviving are his widow, and sons, William A. Jr., and Robert G., the latter president of the B-F-D Co., Diamond Match's pulp and paper subsidiary.

FREDERICK K. TRASK, JR., has been elected a director of the Great Northern Paper Co., according to an announcement by William O. McKay, president. Mr. Trask was formerly vice president of the Farmers Deposit National Bank, Pittsburgh, and during the war served as lieutenant colonel, Office of Fiscal Director, Office of Fiscal Settlement.

FRANK W. EGAN of the F. W. Egan Company, Bound Brook, N. J., for many years district representative of the John Waldron Corp., discussed "The Fundamentals of Coating" as related to equipment, at the first meeting of the 1947-48 season of the Delaware Valley section of TAPPI on Oct. 25 at the Engineers' Club, Philadelphia.

LEO WILLIAM BOWMALL has joined Bulkley, Dunton Cellulose Exports, Inc., as vice president.

DON HUNTER, general superintendent of the Ogdensburg mill of the B-F-D Company, has a young son (Cub Scout age) named after Dard Hunter, no relation, the famous historian of papermaking.

BURT KASSING, a graduate of Syracuse University's forestry school and later superintendent at the Hammermill plant at Erie, Pa., has returned to his alma mater as a member of the faculty of the Paper School, which is a part of the College of Forestry, Syracuse University.

OLIVER M. PORTER, executive director of the U. S. Pulp Producers Association, has been in Europe, while his assistant, James Ritchie, has just completed a tour of the Pacific Northwest. Both are back in headquarters at 122 E. 42nd St., New York.

WILLIAM B. ROSNER, well known in the paper trade, has associated himself with the Roosevelt Paper Company, mill agents and converters, at 19th and Washington Streets, Philadelphia.

JOHN M. GLAZE has been transferred to the New York sales office of the Hooker Electrochemical Co. During the past year he has been with the sales department in Niagara Falls. A graduate chemist of Dartmouth, Mr. Glaze joined Hooker in 1942.

E. G. BAILEY, of Easton, Pa., vice president of The Babcock and Wilcox Co., New York, was elected next national president of the American Society of Mechanical Engineers. Elected vice president was Frank M. Gunby, associate of Charles T. Main, Inc., 201 Devonshire Street, Boston.

"*YOU ARE* the miracle men of the industry, the ones who literally turn paper into money," William Staples, assistant executive secretary of AP&PA, told salesmen of the D. L. Ward Co., paper merchants of Philadelphia, at a sales conference talk in Ocean City, N. J., in September.

LEFT TO RIGHT IN ABOVE PANEL ARE:
A. B. "Ag" HANSEN, President and General Manager of Northern Paper Mills and one of former wartime Directors of the Pulp and Paper Division of WPB and its antecedent agencies. He is presently on an extended tour of Europe including the Scandinavian industry and expects to return to Green Bay, Wis., Dec. 16.

ARTHUR W. TOWNE, of Blake, Moffitt & Towne, pioneer Pacific Coast paper merchants, who will preside at National Paper Trade Association's big fall convention Oct. 27-29 in Hotel Sherman in Chicago.

JOSEPH S. WHITTINGTON, formerly with F. W. Berk & Co., who has joined American Potash & Chemical Corp. as Manager of Sodium Sulfate sales.
ROBERT P. GREEN, native of Pittsfield, Mass., where he has been promoted from Engineering Dept. to Assistant to Sales Manager of E. D. Jones & Co., builders of paper mill machinery.

DR. EDWARD G. LOCKE, of Portland, Ore., Experimental Station of U. S. Forest Survey, who has made a survey of bays and streams and fish spawning areas in Alaska near Ketchikan and Thomas Bay at the probable sites of pulp mills in the two areas of timber now offered to highest bidders by the Forest Service. He and George Chidester, head of Pulp and Paper Division of U. S. Forest Products Laboratory, made the trip to Alaska. Great depths of water and fast tides are expected to adequately safeguard fisheries in regions where mills will be located.

ANDREAS CHRISTENSEN, formerly Pulp Mill Superintendent at Spruce Falls Power & Paper Co., Kapuskasing, Ont., who has recently moved to Terrace Bay, Ont., where he will have important duties in tthe construction and operation of the LongLac Pulp & Paper Co., Ltd., another Kimberly-Clark organization unit. A bleached sulfate pulp mill is being built there by Kimberly-Clark.

DAWSON M. JENNINGS, who will set up new headquarters at Area Forester in states of Alabama and Mississippi for the Southern Pulpwood Conservation Association. He was appointed to that position recently. Mr. Jennings, a 1938 graduate of University of Georgia, has recently been with the Soil Conservation Service in Elberton, Ga., and before that was with the Government's AAA.

GEORGE F. HARDY PASSES

George Fiske Hardy, senior partner of the engineering firm of George F. Hardy & Son, New York, one of the grand old timers of this industry and builder of many pulp and paper mills in Canada, U. S. and Mexico, died in early October in a New York hospital at the age of 82. His sons, George F., and John A., survive. The senior Hardy was also a director of St. Croix Paper Co., Woodland, Me.

Mr. Hardy recently had been working on design of the 600-ton-per-day kraft liner board mill for Macon Kraft Co. (The Mead Corp.) at Macon, Ga., and prior to that he designed a modern sulfate pulp mill at Atentique, Mexico. He was design engineer for the Southland Paper Mills, built at Lufkin, Texas, which makes sulfate pulp and also was the first mill to make newsprint from Southern pine.

Born in Poquonock, Conn., he was graduated from Dartmouth in 1888 and became an engineer in the firm of D. H. and A. B. Tower, in Holyoke, Mass., specialists in pulp and paper mills and historically important to the industry because it was in this firm some of the most prominent engineers of this industry got their start.

In 1896 Mr. Hardy resigned to build the Hudson River Pulp and Paper Co. mill, Corinth, N. Y. The next year he built Laurentide Paper Co., Grand Mere, Quebec, which was the first of its kind in Canada. In 1898 he was appointed chief engineer of the International Paper Co., which controlled the principal paper mills of the country after they were combined. He resigned in 1901 to acquire the Tower business, which had moved to New York.

Mr. Hardy built several paper and pulp mills and power plants since 1901, including the 275,000-hp. hydroelectric plant at Abitibi Canyon, Ont., in 1930-32. He also had designed the Kapuskasing, Ont., plant of Spruce Falls Power and Paper Co., Ltd., owned by The New York Times and Kimberly-Clark Corp.

Since 1932 Mr. Hardy engaged largely in the development of the kraft pulp and paper industry in southern states.

First Printing Paper Arrives From Russia

First shipment of printing paper ever reported from Russia arrived in this country in July, according to Warren B. Bullock, manager of the Import Committee of the American Paper Industry, 122 East 42nd, New York City. The shipment consisted of 40 tons, valued at approximately $11,000.

Small shipments of newsprint from Europe continue to reach the American market, one being 100 tons from Austria, valued at $190 per ton, and French paper is arriving regularly, July imports being 1,750 tons valued at $175 to $180 per ton. Considerable tissue paper has been imported from Sweden. A shipment of fruit wraps has been received from Canada in the state of Washington.

Consulate Asks Kremlin What to Do About Pulp

Two interesting but as yet uncrystallized factors appeared in the pulp market scene last month. One is that the Russian Consulate, New York City, has received enough inquiries about the possibilities of Russian pulp to send to Moscow data on the U. S. pulp situation with a request for information as to what may be practical in this regard.

The other was the offering, untaken as we go to press, of several thousand tons of Swedish wet mechanical pulp. One source said that the offering was more tonnage in this classification than the U. S. normally imports annually. It was believed to be available because of reduction in imports by Britain which has been a good customer for wet mechanical pulp. Reason given for U. S. coolness: Mills could not see paying freight for "water over water."

ARTHUR E. ROZIN, president of Loroco Industries, Inc., of Lancaster and Reading, Ohio, announces the purchase of 50 acres of land adjacent to their paperboard mill property for additional buildings including a guest house, and extension of railroad facilities.

PLENTY OF ROOM FOR EXPANSION

The current peak demand for American paperboard products will not be met even if new plants embracing 1,000,000 tons annual capacity go into production in the next twelve months, T. Raymond Pierce, vice president of the Robert Gair Co., Inc., predicts.

The Gair company expects to begin production around the first of the year at its new plant in Savannah, Ga.

No new capacity has come into production for several years and plants under construction, or projected, have been delayed by strikes and lack of equipment., he said.

Growth of demand for paperboard containers and products is at a level of 4.5 per cent annually and this factor, together with an increasing acceptance of paperboard products for new uses on a wider variety of products, Mr. Pierce said, will continue to tax capacity of the industry.

ST. JOE PAPER CO.

INCREASES EFFICIENCY

While there is something unique in the story of old Port St. Joe, Florida, where the St. Joe Paper Company is located, there is definitely nothing reminiscently antique either of its installations or steps being taken to keep the mill abreast of current Southern advancement.

This was abundantly evident as seen on a recent visit by **PULP & PAPER** to this flourishing industry which has revived and given healthy permanence to a one-time Floridian ghost town.

Improvements and additions either being carried out or to be effected include:

The installation of a second 6000 kilowatt General Electric turbo-generator of the latest design. This includes a power house addition, with the project contract held by Merritt, Chapman & Scott and a total cost of $500,000. Since a new recovery boiler was installed two years ago, there exists an adequate supply of steam for the new generator.

A new Infilco water treatment plant installed and put into operation in recent months.

A new Beloit head box for the mill's 196 inch trim Beloit Fourdrinier.

The addition to a Pusey & Jones secondary head box which will furnish a coating for the 125,000 annual tonnage of liner board. The primary box will contribute 85% of the furnish; the secondary, 15%. The use of the secondary box will permit further refining of the smaller quantity of the pulp making up the surface.

A new box plant at Port St. Joe to have an initial 125-person payroll, with possible expansion to 300. Also an equal unit at Houston, Texas, to which point the St. Joe plant can use water transportation.

In center is HARRY H. SAUNDERS, St. Joe Paper Co.'s Production Manager and a former Florida State Legislator. He has been with Du-Pont organization since 1935.

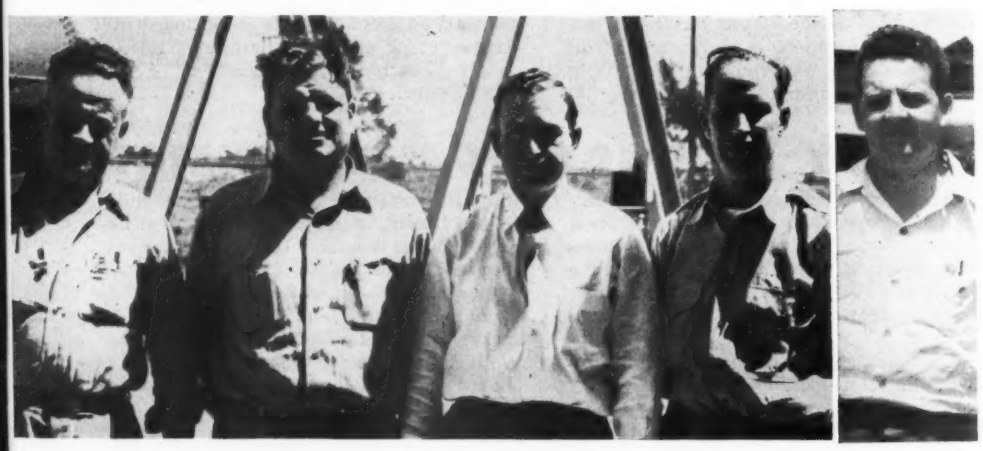
Left, EARL L. HOBAUGH, Mill Supt., and right, S. L. TOWERY, Power Supt.

Good Pulp Washing Record

An interesting feature of the St. Joe mill from an operational standpoint is the low chemical loss achieved, averaging 26 to 27 lbs. sodium sulfate per ton to the sheet. The actual loss in washing is placed as low as 17 lbs. of Na_2SO_4 per ton, ranking among the lowest on the continent. The washing of the mill's 400-ton pulp capacity is performed by six 8x10 Oliver United washers, three each in series, each handling 200 tons per day. A Bristol instrument board is used with the installation.

The wash room is excellently laid out, its ample space and good housekeeping presenting an attractive appearance. While the units, under strictly "on-the-toes" attention of the personnel, are producing good results, the mill management plans new, modern washers from Oliver Nuited Filters, Inc., orders being on file for such equipment.

SOME OF ST. JOE PAPER CO.'S top-flight executives (left to right): CHARLES M. McCARTHY, Paper Mill Supt.; MASSEY J. WARD, Pulp Mill Supt.; WILLIAM M. EBERSOLE, Tech. Adviser; TOM S. COLDEWAY, Master Mechanic, and PAUL S. FENSOM, Industrial Engineer.



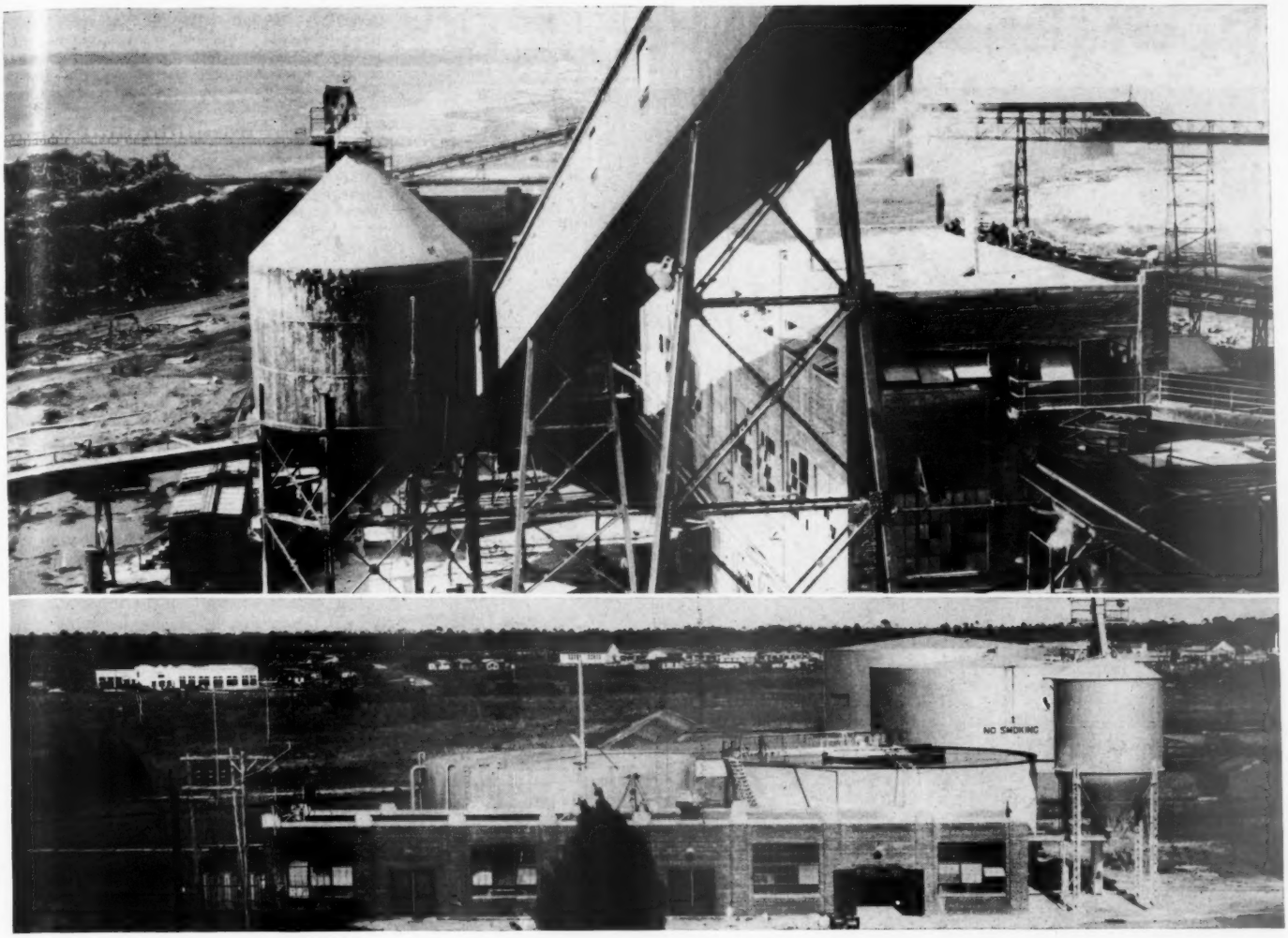
Water Treatment

Here is the story of how the water treatment plant has improved operations.

Production at the Port St. Joe mill started in March, 1938. Water for the mill is drawn from 16 wells, some driven to a shallow depth of 90 to 110 feet; others more deeply to 600 feet. The daily consumption averages about 9,280,000 gallons, with a variation more or less of about 50,000 gallons. The water is classed as "hard," containing 3 to 5 p.p.m. of iron, 14 to 15 grains per gallon of hardness, 8½ grains being due to calcium carbonate.

The high iron content, all in the form of ferrous iron, materially affects the color of the paper, while the calcium carbonate caused plugging of the wires on the vacuum washers. Chlorination was first practiced which oxidized the iron to improve the color of the finished paper. Later an Accelator was installed to treat the entire mill supply which not only reduced iron to 1/10 p.p.m., but also removed the calcium carbonate by precipitation which reduced the hardness to 85 p.p.m. The precipitated calcium carbonate or sludge from the Accelator is pumped to the lime kiln where it is calcined and re-used in the causticizing operations. Thus the operating expense of the Accelator is practically nil in view of lowered fresh lime consumption in causticizing operations.

Prior to December, 1946, boiler feed-



PICTURES TAKEN BY PULP & PAPER at St. Joe Paper Co. illustratea this article. Here, the top view shows the Gulf of Mexico and St. Joseph's Bay coast line over stack of wood at left. Lime storage tank, chip conveyor and Dorr caustic house are in the foreground.

Lower view is of Infilco water treatment plant described in this article.

water was taken from the mill supply and given further treatment to make it usable for makeup. The steam plant includes three 76,200 lbs. per hour (each) Babcock and Wilcox power boilers operating at 600 p.s.i. and 690 degrees F; three Babcock and Wilcox recovery boilers of 47,-600 lbs. capacity each; and one CE 100,-000 lbs. per hour recovery boiler installed two years ago. Makeup averages 23.5% of total evaporation which is equivalent to 2¼ million pounds of water per day.

The treatment installation consists of a two-stage Hot-Process water softener wherein lime and soda ash are used in the primary softener followed by phosphate in the secondary unit. The primary softener consists of one H-180 Infilco Hot-Flow which has a rated capacity to heat and treat 144,000 lbs. per hour, and includes a Hot-Flow sedimentation tank 16 ft. diameter by 28'-4" on the straight vertical side with a 45 degree cone bottom resting upon 10½ ft. supporting legs. The raw water is heated by a spray type heater equipped with vent condenser. The tank is equipped with a 5" inlet regulating valve; and 8" overflow with 8' weight loaded vacuum breakers. For the secondary softener an existing softener tank was used.

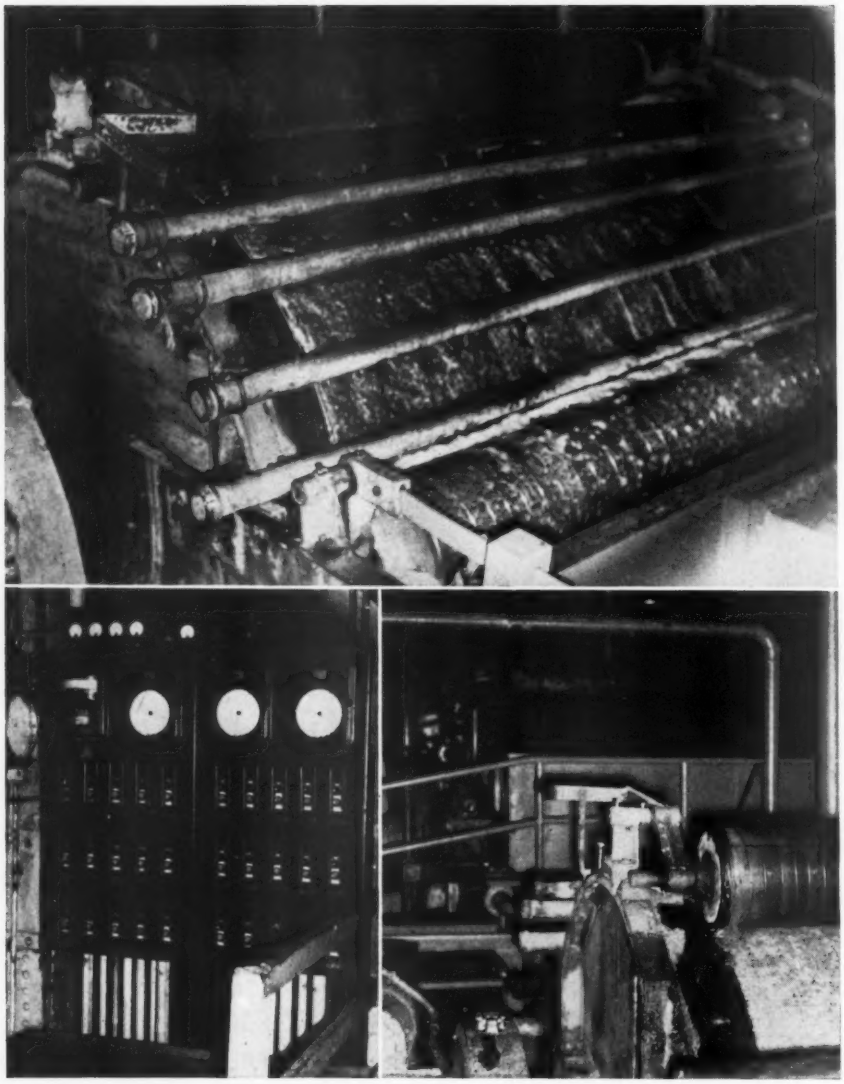
The chemical feed and proportioning equipment includes one 84" x 84" Infilco variable rate wet chemical feeder for dolomitic hydrated lime and soda ash with motorized reduction gear drive; two motor driven centrifugal pumps with motorized reduction gear drive; two motor driven centrifugal pumps with pump suction tank; one 5" venturi proportioning tube which operates the Type TI (electric) automatic proportioner and meter — chemical feed equipment for the second (phosphate stage includes one 48" diameter by 48" phosphate dissolving tank which has a holding capacity of 24-hour charge of anhydrous disodium phosphate. This tank is equipped with motor-driven propeller type agitator and two Milton-Roy phosphate solution pumps, each having a capacity of 18 gallons per hour, operated by the TI proportioner, which pumps the phosphate solution to the secondary softener.

In the treatment process the water flows by gravity from the lime and soda ash reaction tank to the phosphate reaction tank, the steam pressure being equalized between the two tanks. The water leaving the phosphate reaction tank is fitered to remove the last traces of precipitate consisting mostly of calcium phosphate with a small amount of calcium carbonate. The filtered water is pumped to a tray type acetator, thence to a 7,000 gallon surge tank from which Ingersoll-Rand boiler feed pumps take suction.

As a convenience, and for cleanliness, S. L. Towery, power superintendent, has installed in an adjoining room a mixing tank for lime and soda ash. A 7½-ft. diameter tank 5 ft. deep equipped with an agitator formerly used for proportioning chemicals is now used to prepare a slurry of dolomitic lime and soda ash which is fed to the new chemical feeder for accurate proportioning to the raw water. This means of handling chemicals prevents dust and the usual nuisance, and results in keeping the power house clean.

The new primary softener reduces the hardness in the raw water from 14 to 15 grains per gallon to .8 to 1.0 grains per gallon. In the secondary or phosphate softener (in this case reaction tank was already installed) the boiler feedwater

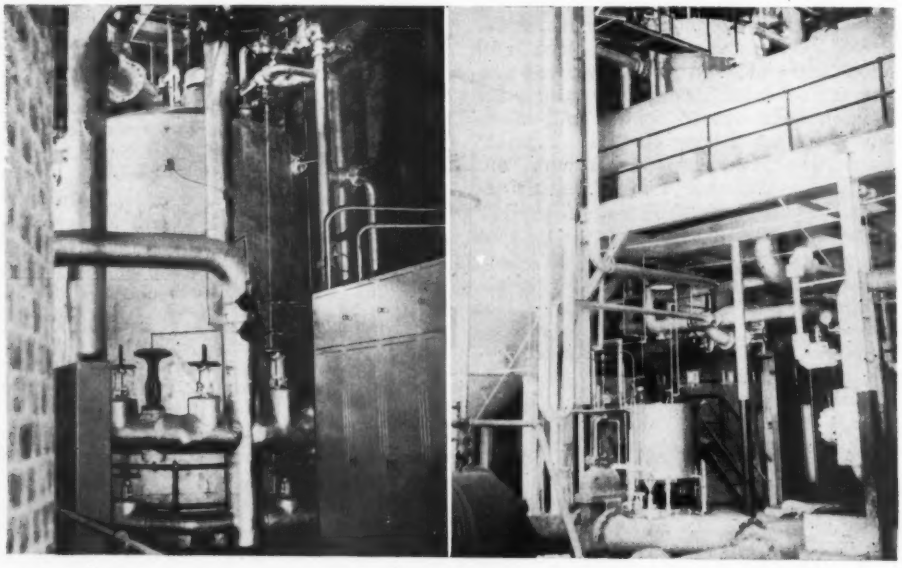
Operations Are Improved



AN OLIVER UNITED FILTERS, Inc., washing installation with Bristol instruments at the St. Joe Paper Co. is shown here. This installation of 8 by 12 Oliver washers, three each in series and six in all, handles 400 tons of pulp per day and has achieved one of the lowest chemical loss records on the continent. Actual loss in washing is placed as low as 17 lbs. NA2SO4 per ton.

Top view is one of the washers at St. Joe and at lower right is a picture showing how three are placed in series. At lower left is the Bristol instrument board for the washers, which will continue to serve when the new Oliver washers go into place.

INTERIOR VIEWS of Infilco water treatment plants at St. Joe Paper Co. Left, second stage process tank, which is on upper deck. Right, Conical first stage process tank on ground floor. Phosphate dissolving tank (round) is on ground floor. Horizontal surge tank and second stage process tank show on second deck.



is further softened so that the filtered water is of zero hardness and contains an excess of about 2-3 parts per million of phosphate. The amounts of chemicals used per million pounds of water treated amount to 275 lbs. hydrated lime, 55 lbs. soda ash; 5 lbs. sodium aluminate, 13.2 lbs. phosphate, 2.0 lbs. caustic soda, and 13 lbs. Nalco "78" sludge conditioner.

Results obtained from the new installation have been satisfactory, reducing the blowdown by permitting the carrying of higher solids content in boiler operation and all treatment is external, rather than adding chemicals to the boiler, which causes sludge to form within the boiler. The continuous blowdown has been reduced so that boiler water concentrations up to 80 grains per gallon were maintained this spring, and it is hoped that as much as 90 to 100 grains may be carried in the near future. The manual blowdown is used each shift only to assert the functioning of the valve and line.

Handling of Pulpwood

Handling of pulpwood at St. Joe Paper Mill is interesting. It is facilitated by an efficient layout and modern equipment. A conveyor operating at an elevation close to railroad car door height receives pulpwood unloaded direct from cars spotted on each side. Open or gondola cars are spotted on outside parallel tracks and unloaded with three cranes. The cranes lift pulpwood over the intervening box cars. They also stack and unstack reserve pulpwood.

The barking drums are two 12 foot in diameter, 45 feet long, chain suspended, U Bar barking drums, manufactured by Fibre Making Processes, Inc., San Francisco and Chicago.

The section of conveyor serving the barking drums starts beneath the railroad car unloading section, and for a short distance has its top approximately at ground level. Here, in a short space allocated for that purpose, trucks are backed up and pulpwood loads rolled over their rear end to drop onto the conveyor chain with a minimum and in some cases no handling.

History

Just a century ago old Port St. Joe was flourishing like a green bay tree and there were visions of it swallowing Savannah and New Orleans. In 1846, to be exact, rains filled low places with mosquito breeding water and before yellow fever had run its course old Port St.

At Florida's St. Joe Paper Co.

Joe was a shell. A storm two years later caved in the ghost town, with nature subsequently completing the obliteration.

Alfred I. DuPont, second largest stockholder of E. I. du Pont de Nemours & Co., moved to Florida in 1926, after having visited there periodically since childhood. With his brother-in-law, Edward Ball, he entered the banking business in Jacksonville, and their enterprises spread.

Port St. Joe was a little fishing village when the St. Joe Paper Company mill started in 1938 as the joint enterprise of The Mead Corp. (Chillicothe, O.) and the estate of Alfred duPont, represented by Mr. Ball, as trustee. Since then, the enterprise has become wholly du Pont. The mill started with 500,000 acres of forest land to back up its pulpwood supply. This was adequate during the war years because not only have its needs met but it shipped about 1,500 carloads of pulpwood to other paper mills. The initial investment at St. Joe has been placed at $10,000,000. It has been producing 125,000 tons of linerboard annually.

The new Port St. Joe population rose from 400 persons to an estimated 4,000. The mill has 665 employes and a two million dollar annual payroll. The mill and affiliated activities bring pay checks to 3,000 persons.

Personnel

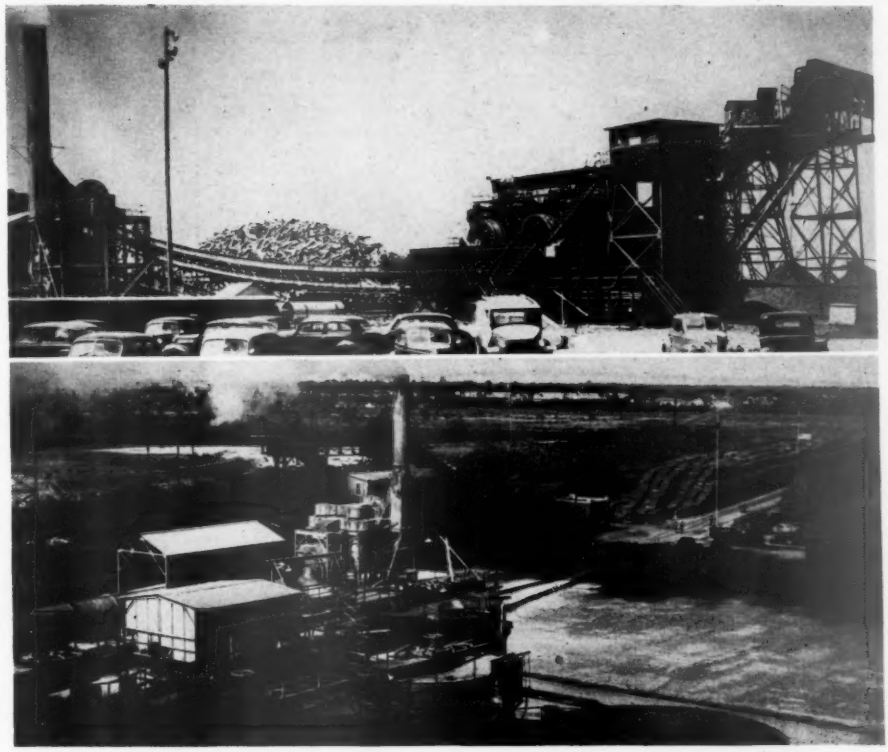
In addition to Mr. Ball, other company executives include; W. T. Edwards, vice president in charge of operations; Henry W. Dew, vice president in charge of sales; Roger L. Main, treasurer and Mrs. Irene Walsh, secretary.

Harry H. Saunders, production manager, is a native of West Virginia, moving to Florida in 1918. He served in two sessions of the Florida legislature (1935-1937). He joined the du Pont organization in 1935, and became production manager in 1940.

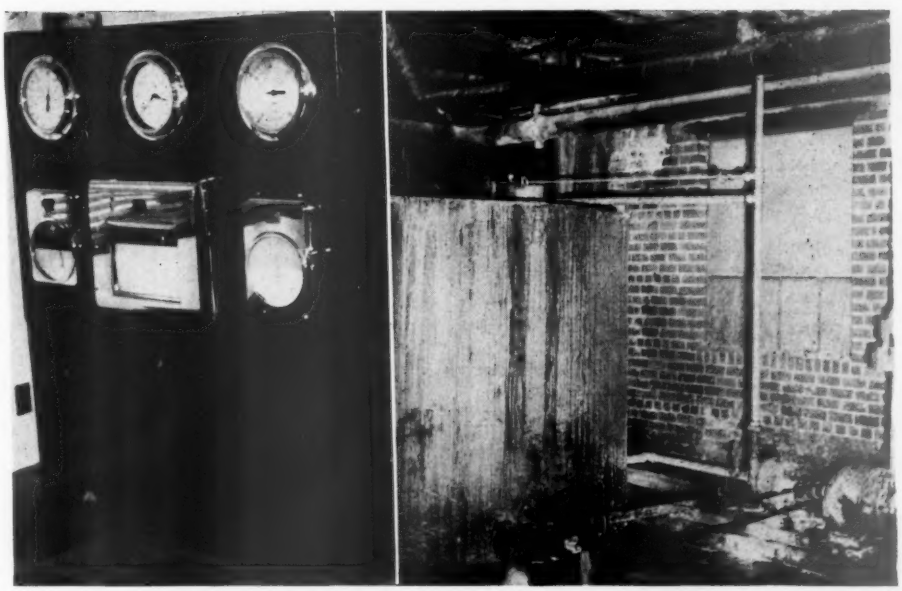
Earl L. Hobaugh, mill superintendent, joined St. Joe in 1944 after having been affiliated with International Paper in the north, Minnesota & Ontario Paper Co., Crossett Paper Mill, and Union Bag & Paper Corp.

CYRIL J. HAGUE, personnel manager for Pacific Mills, Ltd., for the past five years at Ocean Falls, B. C., has taken up his new post at Vancouver head office as assistant to E. W. Campbell, personnel director of the company. L. S. McGill, who served with the R.C.A.F. during the war, has been transferred to personnel from the technical control staff at Ocean Falls.

CANADIAN NEWSPRINT mills produced 213,135 tons more in the first seven months of 1947 than in the first seven months of 1946, which was an increase of 9.0%, according to R. S. Kellogg, secretary of News Print Service Bureau, New York. The output in the United States was 29,246 tons of newsprint or 6.4% more than in the first seven months of 1946; in Newfoundland production was 3,497 tons or 1.7% more, making a total increase of 245,678 tons, or 8.1%.



MORE VIEWS BY PULP & PAPER at St. Joe Paper Co. Above are shown two 12-ft. diameter, 45 ft. long, chain suspended U Bar barking drums manufactured by Fibre Making Processes, Inc. (Chicago and San Francisco). Below is another view of pulpwood yard and conveyors.



HERE ARE EXAMPLES OF INTERESTING IDEAS developed at St. Joe Paper Co. At left, a Bristol instrument board in the office of Production Manager Harry H. Saunders, opposite his desk which tells him, quick as a flash, critical information about the mill. Across top, left to right, are air pressure guage, telachrometer and tank water level guage giving information on new water treatment plant. The three instruments in lower row, left to right, are barometer, tachometer and thermometer showing outside temperature. A red light (not in picture) flashes on in the office when there is a paper machine break and the telachrometer starts running. Small green lights flash phone code calls.

At right, an idea that originated in this mill—a mixing tank for making up lime and caustic soda for the first process stage for boiler water treatment. This is in compartment adjoining power house.

Personals

SOUTH

WALTER BAILEY, formerly chief engineer of Fort Orange Paper Co., Castleton-on-Hudson, N. Y., folding boxboard and carton manufacturers, has joined the Black-Clawson-Shartle-Dilts concern and will travel out of the Shartle Division at Middletown, Ohio, under the supervision of the Sales Manager, John Hamm.

Mr. Bailey will specialize in stock treating, and pumping and agitation equipment.

LLOYD LANG, former technical superintendent of the Kimberly, Wis., mill and development engineer with Kimberly-Clark Corp., has joined Crossett Industries, Crossett, Ark., as development engineer in pulp and paper research.

DAVID B. HILL has been appointed district field engineer in the Atlanta office of Chain Belt Co., Milwaukee, Wis. Previously he had been an application engineer in the company's conveyor division at Milwaukee.

ROBERT LEVY, technical director at Ecusta Paper Corp., Pisgah Forest, N. C., known widely in TAPPI for his work on new pulp viscosity measurement methods, thinks there is no part of the U. S. as wonderful as the Great Smokies country but he likes to get back to Chicago occasionally.

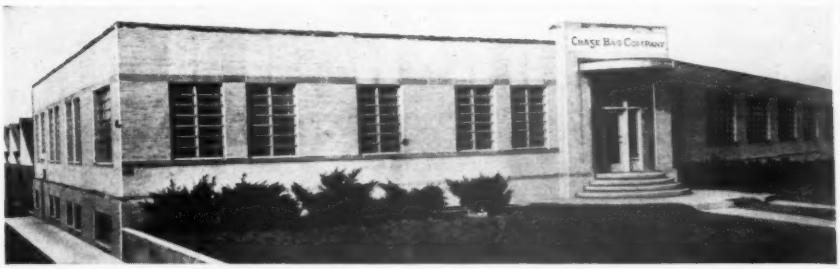
He and Mrs. Levy are both ex-Chicagoans but he has lived seven years in North Carolina. They have two children, ages 2 and 4. Mr. Levy has devoted much of his time recently on plastics wet strength studies.

ED KNAPP, for a number of years in charge of the mechanization program of Southern Pulpwood Association, has gone into the business of pulpwood production itself. He will furnish pulpwood to the new Macon Kraft Corp's. mill at Macon, Ga., and has opened an office in the First National bank building there. Mr. Knapp will be associated with Georgia Timberlands, Inc.

STEIN, HALL & CO., Inc., announce appointment of William N. Kline, Jr. as manager of the company's branch office in Charlotte, North Carolina.

UNIVERSITY OF FLORIDA, at Gainesville, Fla., now has a full forestry course and plans to graduate between 25 and 50 annually. Florida has one of the largest forest land acreages in the South. The university maintains two 2,000 acre forests. The first courses in forestry were offered by the college of agriculture in 1935. The School of Forestry is under Director Harold Newins.

FOUR KEY MEN recently jointed the staff at Columbia River Paper Mills, Vancouver, Wash., coming from the company's former Los Angeles division. Left to right— DR. WALTER HOFFMAN, Parchment Division Supert.; E. C. HILL, Finishing Room Foreman; ALLAN STRANG, Chief Chemist; and RUSSELL COOK, Printing Dept. Foreman. These Supervisors and 14 other men formerly at the California-Oregon Paper Mills division arrived at Vancouver Sept. 3. Waxing and parchment division machinery shipped from Los Angeles plant is now being installed. Remainder of Los Angeles 70-tons-a-day mill was sold to Container Corp. of American and Owens-Illinois Glass. Operations there are now directed by William Hooker, of Emeryville, Calif., West Coast Mgr. for Container Corp.



HERE ONE OF THREE NEW BAG PLANTS completed this year by Chase Bag Co. This one, at St. Louis, Mo., has 100,000 sq. ft. of floor space for bag machines, warehouse, cafeteria and art department. A new Chase plant at Minneapolis has 100,000 sq. ft. for similar use. Another new Chase plant built alongside the Crossett Paper Mills in Crossett, Ark., has manufacturing area 340 ft. by 180 ft. and Crossett offices occupy an additional 3,000 sq. ft. Plants are equipped with radiant floor heating systems. Chase now has 15 factories in the U. S., a testimonial to wider use of paper bags. An addition is being made at Reidsville, N. C.

Newsprint Machine Ordered for Australia

L. R. Benjamin, general superintendent of Australian Newsprint Mills Pty., Ltd., told **PULP & PAPER** in Montreal that a contract had been awarded Dominion Engineering Co., Montreal, for a 246-inch newsprint machine, which will supplement a 172-inch Walmsley.

Mr. Benjamin, accompanied by T. A. Carey, chief engineer of the Australian mill, arrived at Boston last spring and visited Eastern and Pacific Northwest mills and later mills in the United Kingdom and Sweden.

EXPERIMENTS IN UTILIZATION of New Zealand's insignis pine in the manufacture of newsprint have been carried out in Australia with fair success, although the tests were said to have been insufficient to demonstrate the full possibilities of the wood.

DU PONT Company has sold its plant at Russell, Mass., to Texon, Inc., and it will continue producing leather and other manufacturing materials. Du Pont had operated it on lease from Crescent Paper Corp. since 1939 for commercial development of a chemically impregnated nonwoven coating base.

ROBERT M. FOWLER, president of the Canadian Pulp and Paper Association, has returned to his office in Montreal after a tour of the United Kingdom and several North European countries.

A Big Year For S. L. de Carteret of I. P.

This has been a big year for Samuel Laurence de Carteret of Montreal. Last January he was chosen chairman of the executive board, Canadian Pulp and Paper Association. Last month he was promoted to the presidency of Canadian International Paper Co., his predecessor, John H. Hinman continuing as a member of the board.

His name has given many friends of Mr. de Carteret the impression that he is a French-Canadian. Actually, he was born in Auckland, New Zealand, and before going to Canada to live he spent some time in India, where he was educated, and in the United States, where he attended Mount Hermon, Mass., preparatory school. He finished his scholastic career at Yale and then set out to make a road survey for the Riordan Pulp & Paper Co. in the Rouge River district. He has been in the pulp and paper industry ever since, and he rose to the top through the forest engineering channels. He joined C.I.P. in 1938 as vice-president and general manager. During World War II he served as Canadian deputy minister of national defense.

Mr. de Carteret accounts for his French name by the fact that his ancestors emigrated from the island of Jersey a long time ago.

K. C. STANSMORE, formerly engineer with the Toronto office of the Dorr Co., has been appointed to the company's foreign export division at New York.

NEW MILLS IN B. C.

Bowater's Interested; MacMillan Plans

AS WE REPORTED LAST MONTH, George H. Mead, Chairman of the Board, The Mead Corp., Chillicothe, O., and Mrs. Meade and their daughter, visited the new 165-ton kraft pulp mill of Bloedel, Stewart & Welch, Ltd., at Port Alberni, British Columbia, several weeks ago. The Mead Sales Co., Inc., affiliated with the big pulp and paper form of Ohio, will handle marketing of the new mill's pulp output in the United States.

In above picture, taken at the new mill—the first ever built on Vancouver Island and located in historic Indian country—are (left to right): MR. MEAD; S. G. SMITH, Vice President in charge of Bloedel, Stewart & Welch logging division; MRS. MEAD; J. H. BLOEDEL, Chairman of the company bearing his name; MISS BARBARA MEAD, and J. S. MOTTISHAW, Company Forester. Mr. Bloedel heads both Canadian and American companies which for many years have been outstanding in timber development and use on the Pacific Coast.

Developments of the past few weeks indicate that a major swing of the pendulum in pulp and paper expansion may be towards British Columbia.

With all existing mills currently carrying out large-scale improvements and extensions designed to increase production or effect better quality of output, and with two new mills under construction—one of them to be in full production within a few weeks, there is every likelihood of the entry into the British Columbia field of several new groups.

If the plans now being discussed materialize, production of newsprint and pulp in British Columbia during the next few years will be substantially increased, and the total capital investment in the Canadian west coast industry will advance to well over $150,000,000. Present capital investment is estimated at about $90,000,000.

Readers of **PULP & PAPER'S** are already familiar with the program of Bloedel, Stewart & Welch, Ltd., at Port Alberni and of the Celanese Corp. of America at Port Edward, 8 miles south of Prince Rupert. These two projects represent an expenditure of some $30,000,000 altogether. The Bloedel mill, at present waiting for full supply of power from the British Columbia Power Commission at Campbell River, will probably swing into full operation before the end of the year, making 165 tons a day of unbleached Kraft pulp. The Celanese project, under the name of Columbia Cellulose Co. (formerly Port Edward Cellulose Co.) is still in the preliminary stages of development. The mill is expected to be producing high grade sulfite pulp within 16 months. A kraft mill to operate in connection with this latter project will eventually be built, but construction is being held in abeyance for the time being owing to the high capital investment involved. The sulfite mill alone will probably cost more than $20,000,000, according to present estimates.

Howard Simons Designs New Mill

At least two large timber and lumber producing organizations in British Columbia are said to be contemplating entry into the pulp industry, and one of them has its program well under way. This is H. R. MacMillan Export Co., which is going ahead with a $3,000,000 wallboard mill, presumably in the Vancouver area, to utilize materials now going to waste or to purposes where the return is considerably less than it would be if they were converted into board.

Howard Simons of Vancouver, designer of the new Port Alberine mill, has been engaged to draft plans for the project. Dr. John S. Bates, eminent pulp authority, has been acting as consultant.

The two other timber and lumber companies involved in reports of pulp expansions cannot at present be named, but each of them has large timber holdings and processing capacity, with interests both on the mainland and Vancouver Island.

One of the most interesting prospects concerns Bowater's Newfoundland Pulp and Paper Mills, Ltd., operators of one of the world's largest newsprint mills at Corner Brook, Newfoundland, as well as a big newsprint mill at Sittingborne, England, with one of the widest newsprint machines in operation.

Bowaters are considering the advisability of establishing a big newsprint mill in British Columbia, preferably on Vancouver Island. Representatives of the company, experts on timber as well as mill operation, were recently on the Pacific coast and they inspected possible sites at Duncan Bay, on the east coast of Vancouver Island, near Campbell River, and at Nootka Sound on the west coast of the island.

A **PULP & PAPER** editor learned in Montreal that the Bowaters interests had their eye on sites in the Southern states, too, but more recently it was reported that the South had been dropped from consideration, at least for the time being.

The two main problems confronting the Bowaters interests are supply of timber and power. They are said to have reconciled themselves to a continuing difficulty in getting adequate pulpwood supplies for their mill in the United Kingdom, and if a mill is to be built in British Columbia at least one of the big Walmsley paper machines now in use at the Sittingborne mill would be dismantled and shipped to the coast for re-assembly.

According to spokesmen for the British Columbia government, there is ample timber and waterpower, as well as process water, at several points under consideration by the Bowaters interests.

If Bowaters did establish a mill in British Columbia, it would be the third newsprint producer in the province, the others being Pacific Mills, Ltd., at Ocean Falls, and Powell River Co., the latter at present being engaged in the installation of a new machine which will probably be in operation with a year.

At Powell River Co. and Pacific Mills, present expansion plans contemplate the expenditure of upwards of $10,000,000. Also British Columbia Pulp & Paper Mills, Sorg Pulp Co. and Westminster Paper Co. each are carrying out improvements running close to $2,000,000, and Sidney Roofing & Paper Co. is spending more than $1,000,000 on mill enlargement and new equipment.

Work on Celanese Mill

Excavation for the foundations of the Port Edward pulp mill for Celanese Corp. is expected to be completed in December, and construction of the main mill building 200x1200 feet, the combined power and boiler-house and other units will then be undertaken.

A complete machine shop has been or-

H. R. MACMILLAN (left), one of Canada's most prominent timber operators and head of one of the biggest wood products companies in the Far West, who is making his bow in this industry with a new pulp-board mill in British Columbia. HOWARD SIMONS (right) of Vancouver, B. C., who has been retained by Mr. MacMillan to design the new pulp and board mill. He was construction engineer for the recently completed Bloedel, Stewart & Welch kraft mill and for the sulfite mill built few years ago by Powell River Co. His father was prominent Chicago engineer.

ganized at Port Edward, and a fleet of 10 dump trucks and bulldozers is operated there, as well as air compressors, wagon drills, shovels, etc. Laying of the foundation will be started even before the site is fully cleared.

The Montreal engineering and consulting firm of Stadler, Hurter & Co. is concentrating on design of the mill, with R. A. Baker advising on certain details. Height of the mill building will be the equivalent of six or seven stories in an irregular skyline. The length axis will be from dock and railroad track to Watson Island Hill, where the combined boiler and steam power house is to be located.

Power for the mill has yet to be determined. A 10,000 h.p. load will be necessary, and there are two alternative courses—to use coal from the Smithers fields east of Prince Rupert and served by the Canadian National Railways, or fuel oil imported from California or elsewhere. Boilers are being set for both.

When the mill goes into production, freight will be created for a two-way steamship service between Prince Rupert-Port Edward and the Atlantic seaboard. Ships will carry sulphur, salt, etc., westward, and return with bales of cellulose fiber, to be used by the parent company in celanese manufacture.

Celanese Opens New Research Labs

"While the new laboratories here at Summit, N. J., are new and equipped with new, scientific tools, there is nothing new about research in our company," said Mr. George Schneider, vice president and technical director of Celanese Corp on the occasion of the opening of the new research laboratory.

"Do not draw the conclusion," he said, "that research will no longer be carried out at our plants. Important development work is still in progress there, and pilot plants with necessary laboratory facilities are operated."

Mr. Schneider has been active in the beginning construction of the Columbia Cellulose Co, the new $15,000,000 Celanese pulp mill project near Prince Rupert, B. C.

Harold Blancke, president of Celanese, revealed last month to **PULP & PAPER** that an addition will be made to the laboratory especially for the purpose of pulp research.

30 In Paper School At Syracuse University

About 30 students are enrolled this year in the Paper School of the College of Forestry, Syracuse University, according to Professor C. E. Libby, dean of the school since 1923.

Sixteen of them are working on a hardwood pulping study sponsored by 12 mills, the project being known as the Empire State Paper Research Associates. Prof. Libby told **PULP & PAPER**, during its recent visit to the school, that plans are being drawn up for a new forestry building and a much enlarged laboratory for papermaking equipment.

Dairy-Pak Firm Buys Cleveland Plant

A new paper milk bottle industry will be establishedd in Cleveland as the result of the sale to Dairy-Pak Inc. of the Cleveland Wire Spring Plant No. 2. Price paid was about $400,000. With equipment, the 66,000-square-foot, one-story plant on an eight-acre site will represent an investment of $1,250,000.

Dairy-Pak is headed by E. T. Gardner of Gardner-Richardson Co., Middletown, Ohio, largest carton manufactuers in the nation.

The above photograph, taken recently in Quebec by PULP & PAPER, shows JOHN STADLER (left), eminent pulp and paper mill authority, with HERTON CASTONGUAY, Superintendent of Lake St. John Power & Paper Co., Dolbeau, Que. Mr. Stadler's Montreal engineering firm, Stagler, Hurter & Co., is at present engaged in drawing up plans for the sulfite pulp mill of Celanese Corporation of America (Port Edwards Cellulose Co.) to be built at Port Edward, near Prince Rupert, B. C. The company was also consultant to LongLac Pulp & Paper Co. at Terrace Bay, Ont.

GEOFFREY JONES, formerly of the Iroquois Falls mill of Abitibi Power & Paper Co., has joined the staff of the Bloedel, Stewart & Welch sulfate mill at Port Alberni as resident engineer.

MACHINE ORDERED FOR NEW MILL

Walter DeLong, vice president and manager of the Kraft Pulp Division of St. Regis Paper Co., Tacoma, Wash., told **PULP & PAPER** that a 180-inch paper machine with capacity of 240 tons per day has been ordered for the new paper mill to be built at Tacoma and should be in operation before the end of 1948.

The new machine will be manufactured in the shops of Pusey & Jones Corp., Wilmington, Del. It will trim 166 inches and is designed for 2,000 feet per minute production. There will be 76 dryers and 20 felt rolls on the machine and it will have a GE drive.

As previously announced in this magazine, the Tacoma paper mill will be built alongside the existing 300 tons capacity pulp mill there, and a bag factory also will be built, with bag machines installed including those now in operation in Seattle. Pulp not converted in Tacoma will be shipped as market pulp.

About $6,000,000 will be spent on the paper mill and bag plant and about 1,000 persons will be employed.

Mr. DeLong came to New York in late October for a meeting of St. Regis directors.

New Vancouver Plant

Completion of a new $450,000 multiwall paper bag plant at Vancouver, B. C., by the St. Regis Paper Co. (Canada) Ltd., marks another milestone in the organization's long-range plan for plant expansion and modernization, according to Thomas H. Cosford, vice-president.

Mr. Cosford pointed out that the new plant, with an annual capacity three times that of the former Vancouver plant, was built with the long-term view of serving industry on the West Coast and, in addition, meeting the increased demand for paper bags for the Canadian export trade.

"Construction of the plant was necessitated by the growing demand from Canadian industries for St. Regis multiwall paper bags to package the Dominion's chemicals, fertilizers, cement, rock products, sugar, flour and other foods," he said.

The Vancouver plant, together with the recently-expanded facilities at Dryden, Ontario and Three Rivers, Que., will enable the St. Regis Paper Company (Canada) Ltd. to develop a capacity of 225,-.00,000 bags annually.

TAPPI ENGINEERS

Some Pre-Meeting Interviews

As this issue went to press, plans for the second annual TAPPI Engineering Conference in Philadelphia's Bellevue-Stratford on Nov. 3-5 indicate that gathering will be just about as significant as the first one, which drew 400 top mill executives and engineers to Milwaukee last fall.

Again, the Philadelphia meeting will bring together many men who had not attended technical meetings very regularly or at all before last year. This time J. W. Hemphill of the Johns-Manville Sales Co., who heads up TAPPI's reorganized engineering division, has arranged a program on subjects requested by the plant engineers.

The increasingly important role of engineers in plant management and operation is recognized in these meetings, as it was in the large portion of **PULP & PAPER'S** North American Review Number of this year devoted to a continent-wide survey of engineering advancement and engineering problems of the industry. Many of the engineers who contributed their ideas to that published symposium are leaders in the forthcoming Philadelphia meeting.

Milton Jacobs, of Charles T. Main, Inc., Boston, who chairmans the opening session on Nov. 3 on design and economic aspects of mill engineering, told **PULP & PAPER**: "These are years of engineering application rather than development" and he named off an interesting list of applications: Hydraulic barkers; multiple knife chippers; high pressures and temperatures in boilers; cabinet type electrical load centers; multiple generator sets for machine drives; higher machine speeds; high speed and wider supercalenders; coating on the machine; coating preparation; groundwood bleaching; continuous grinders; single blow pit and vacuum washing; improved flat screens and knotters; pre-fab and transite piping.

The drying and ventilating session, as usual, will be under the experienced direction of A. E. Montgomery, vice president and western manager for J. O. Ross Engineering Corp. A survey of practices of mills will be reported upon. A paper by L. G. Jannett of that company will report on heating water with waste heat. George R. Wadleigh of New York conducts another session on that day on materials handling.

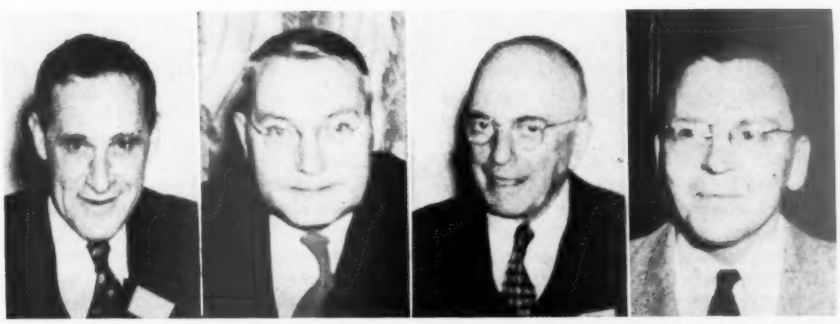
George H. Pringle, chief engineer of the Chillicothe, Ohio, division of The Mead Corp. and alumnus of Canada's McGill, is in charge of the mill maintenance and materials session which leads off the program on Tuesday, Nov. 4.

LEADING PARTICIPANTS IN TAPPI'S Engineering Conference in Philadelphia (left to right): A. E. MONTGOMERY, Vice President and Western Manager for J. O. Ross Engineering Corp., Chicago, who again will direct heating and ventilating discussions.

R. S. JOHNSTON, Vice President of Pusey & Jones Corp., who will conduct conference delegates on a tour of their machine-building shops in Wilmington, Del.

GEORGE W. CHARTERS, Assistant Resident Manager of Camas, Wash., mill of Crown Zellerbach Corp., who will present "Charters Plan" for preventive maintenance system in a mill. His plan has been widely praised by engineers committee members.

J. W. HEMPHILL, Assistant Manager of Power Plant Products Division of Johns-Manville Corp., New York, who is General Chairman of the convention and also Chairman of reorganized TAPPI Engineering Division.



SOME OF PROMINENT ENGINEERS of the industry who are active in this month's Engineering conference in Philadelphia (left to right):

MILTON JACOBS, of Charles T. Main, Inc., consulting firm of Boston, who Chairmans the opening session on design and economic aspects of mill engineering.

J. E. A. WARNER, Robert Gair Co., Inc., who will be Chairman of steam and power session. GEORGE R. WADLEIGH, New York engineer, who heads up the materials handling discussions.

P. H. GOLDSMITH, Sales Engineer for Pusey & Jones Corp., machinery builders of Wilmington, Del., who will be hosts to the convention on a tour of their plant.

"The Charters Plan"

George Charters, assistant resident manager of the big Camas, Wash., mill of Crown Zellerbach Corp., will present his fully-detailed preventative maintenance program for a mill at this meeting. Mr. Pringle and others in TAPPI's engineering division have told **PULP & PAPER** editors that this model program for a mill as worked out by Mr. Charters is the best any of them had yet seen or heard about. The "Charters Plan" will draw a lot of interest at this meeting, but mills are cautioned that it is a plan which may take some time to put into effect with adequate manpower. In this connection, Mr. Pringle said the influx of college-trained ex-GI's will supply manpower. Helpers' jobs and maintenance jobs, he said, should be made attractive to them, although at first they should start on drafting boards instead of maintenance and operations.

Systematic operation of maintenance and construction departments will be dis-

cussed by C. Lee Dryden of Marathon's Menasha, Wis., mill.

In the afternoon of Nov. 4, the trip will be made, as previously announced in these columns, to the Pusey & Jones paper machinery shops in Wilmington, Del. It has been planned to engage a river boat for the trip.

On the final day, the steam and power session will be headed by J. E. A. Warner, of Robert Gair Co., with a paper by E. L. Cowan and W. V. Knight, of Gaylord Container entitled "Short Circuit Analysis of 40,000-kva., 2300-volt Power System on an A. C. Calculator." At the last session of TAPPI engineers in New York there was some preliminary discussion of changes in the power system at the Gaylord mill in Bogalusa, La., and the way that company was meeting better power distribution and safety factors under the new system. Therefore, there is again likely to be some interesting discussion when the Gaylord men take the floor.

Supercalenders

The final session is on engineering research, including talks by J. B. Gough, British-born chief engineer for all mills of The Mead Corp., on supercalendering, and on physics of packing by H. G. Koch of Johns-Manville. Mr. Gough, in an interview published in the engineering section of our North American Review Number this year, said:

"More extremely wide, heavy, expensive and high speed supercalenders are going to be used and there is little doubt that this is going to be a challenge to the machinery designer, as well as to the operators in the mill. As far as I know, a Wisconsin mill now has the largest with a 40-inch diameter by about 187-inch face forged alloy steel hardended and tempered bottom roll, and there are on order a still larger supercalender with 48-inch diameter by about 215-inch face. Certainly these two sizes of supercalenders appear to be an important as well as interesting example of an advancement in engineering."

At the Philadelphia session, Mr. Gough will discuss supercalender roll deflection and crown. In connection with the advancements in supercalendering, Henry Madsen, president of Appleton Machine Co., told **PULP & PAPER** that speeds up to 1800 feet per minute have been made possible by the development of superior bearings and a shift from cast iron to welded steel frames for the calender rolls. Virtually every book and magazine paper mill in the U. S. and Canada have been putting in super-calenders, which will intensify the interest in Mr. Gough's talk.

Invitations to visit plants of the Downingtown Manufacturing Co., Downingtown, Pa., and Lukens Steel Co., Coatesville, Pa., will be given all who register at the meeting. The trip will be made on Thursday, Nov. 6, by special busses.

BRUNO L. BERKLUND has joined the Woodlands Department of Nekoosa-Edwards Paper Co., Port Edwards, Wis. A 1942 forestry graduate of the University of Minnesota, he served three years as bombardier in the Air Forces.

BARBER IS TAPPI VICE PRESIDENT

WILLIAM R. BARBER (left), elected interim Vice President of National TAPPI. He is head of Crown Z's Central Research and Technical Department. He was born in Bradford, Pa., came west in 1911 and is a graduate of Stanford.

HAROLD BIALKOWSKY (right), Associate Research Director of the Pulp Division of Weyerhaeuser Timber Co., who has been nominated to succeed Mr. Barber as Pacific Coast member of TAPPI's Executive Committee. Nomination is tantamount to election. He was formerly active in the Wisconsin industry before moving west.

William R. Barber, technical director of the Crown Zellerbach Corp.'s Central Research and Technical Department, Camas, Wash., has been elected interim vice president of National TAPPI to fill the position vacated by W. F. Gillespie, technical director of the Gaylord Container Corp., Bogalusa, Louisiana, when Mr. Gillespie succeeded to the presidency by reason of the recent death of Worthen E. Brawn.

The appointment of Mr. Barber, made by the national executive committee by constitutional provision of the association, holds until the regularly elected vice president assumes office in February, 1948. Mr. Barber would have retired as Pacific section's representative on the national executive commuittee at that time, at the expiration of his three-year term.

Mr. Barber's election to the interim vice presidency was in recognition of his long and active interest in national TAPPI affairs and particularly his energetic promotion of the Pacific section, of which he is a past chairman. It was under his local chairmanship that the "two conventions a year" practice was abolished in favor of the five sectional dinner meetings, and again at his instigation that the afternoon technical session-evening social dinner idea, so successful in Pacific section programs, was developed.

Mr. Barber has been always the champion of the young men of TAPPI, encouraging their attendance at TAPPI meetings and he has been a strong supporter of the Shibley Award sponsored by the Pacific section.

"It has seemed to me, and still seems, that the elders of the industry must devote a proper time and effort to training their continuity of succession," he remarked.

Besides his busy job as director of the Crown Zellerbach Corp.'s etxensive technical interests, Mr. Barber has been the recipient of some of the industry's other recognitions; member of the technical committee of APPA, the research committee of the Lithographic Technical Foundation, in 1940 recipient of the Modern Pioneer Award of the National Association of Manufacturers. He is also member of American Institute of Chemical Engineers, the American Chemical Society, the Canadian Technical Association of the Pulp and Paper Industry, the Association of Papermakers of Great Britain & Ireland, the American Pulp and Paper Mill Superintendents' Association.

High Honor For Harold Bialkowsky

Dr. Harold Bialkowsky, associate research director of the Pulp Division of Weyerhaeuser Timber Co., has been nominated to succeed William R. Barber on TAPPI's national executive committee as Pacific Coast member and that nomination is tantamount to election. Mr. Barber's three-year term on the committee would have expired next February, but the vacancy developed when he was elected vice president of TAPPI.

"Paper Week" Dates

Dates for "Paper Week," 1948, in New York:

American Paper and Pulp Assn. and Salesmen's Association—Waldorf-Astoria —Feb. 23-27.

National TAPPI Convention—Commodore—Feb. 23-26.

Union Bag & Paper Wins "Oscar" for Annual Report

The 1946 annual report of Union Bag & Paper Corp. was judged best of the paper industry by the board of judges in the Financial World annual report survey. The bronze "Oscar of Industry" trophy was formally presented to Alexander Calder, president of the company, at the awards banquet in New York Oct. 10.

In this industrial classification, Dennison Mfg. Co. was runner-up, while United Wallpaper, Inc., came in third.

The board of judges was headed by Dr. Lewis Haney, professor of economics of New York University.

TRENDS IN PULP IMPORTS

Trends in wood pulp imports from Europe (in short tons) by U. S. mills are shown in this table, released by E. W. Tinker, American Paper and Pulp Assn. secretary:

	Sweden	*Finland*	*Norway*	*Russia*	*Total*
June-Dec. 1945	672,261	0	0	0	672,261
1946	445.124	115,220	0	0	560,344
1st 8 Mos. 1947	385,316	124,851	5,767	3,143	519,077

INDIANA EXPANSION

Woman Becomes Manager

MISS EDNA S. ROBERTSON, who rose from position of stenographer to General Manager of 30-ton Kieffer Paper Mills in Ewing (Brownstown), Indiana, a specialty mill making cushioning materials. At left, ELMER F. DARLAGE, who rose from fireman to General Superintendent, and at right, TOM P. KIEFFER, nephew of the founder and Assistant Manager and Personnel Director.

Women in industry, a wartime development, brought to the front many women with executive talents who are carrying on and haye advanced to top positions in industrial concerns. This has occurred in the Kieffer Paper Mills, of Brownstown, Indiana, where recently Miss Edna S. Robertson, assistant treasurer, was promoted to general manager, succeeding J. E. Kieffer, who still retains his position as treasurer and advisor. This mill makes 30 tons a day of corrugated, papier-mache board, cushioning papers and other specialties on three single cylinder machines.

Kieffer Paper Mills, as well as its affiliate, Shoksorb Paper Products Co., is planning an expansion program as soon as conditions become normal. Both companies operate six days per week and have a large backlog of orders.

A brick and concrete building—monitor type, 100 by 120 ft.—to conform with style of the rest of the plant, will be built to house additional machinery and for the handling of products in a more efficient manner. A reserve fund of $100,000 has been set up for this purpose.

Miss Robertson has been with the company 25 years, starting as a stenographer. The paper manufacturing business appealed to her to such an extent that she gradually took on more responsibilities and higher positions until the trustees considered her qualified to successfully handle the many complex problems that confronts the company in taking care of their customers' requirements during these strenuous times.

Mr. Elmer F. Darlage, plant superintendent, has been promoted to general superintendent. Like Miss Robertson, he earned his position by his desire to learn all possible about the mechanical and manufacturing end of the business. He has been with the company 14 years, starting as a fireman and was promoted to superintendent nine years ago.

Tom P. Kieffer, a Purdue graduate and a nephew of J. E. Kieffer, has been appointed assistant manager and personnel director. He worked in the mill in various capacities during vacations while attending Purdue University and after graduating he joined the U. S. Navy as an ensign. He served three years in the South Pacific, was discharged a lieutenant, and expects to make the paper business his life work.

Mr. Kieffer, his uncle, started in the paper business in the old Virginia Straw Wrapping Mill at Lafayette, Ind., in 1890, and has been in paper manufacturing continuously. He organized Kieffer Paper Mills in 1907, and developed "Shoksorb," a molded indented paper, used extensively by industry for cushioning purposes. In 1944 he organized the Shoksorb Paper Products Co. with some outside people.

"Shoksorb" paper is laminated with kraft and crepe paper by the Shoksorb Paper Products Co. and furnished in roll or sheet form. This company also manufacturers Shoksorb brick trays, fruit basket circles, fruit box pads, furniture pads, tubes, etc. They also convert for special uses, considerable paper from other mills.

Important Advances In Statistical Methods

A new teaching program on statistical methods has been introduced at the Institute of Paper Chemistry, Appleton, Wis., under the direction of Dr. Geoffrey Beall.

Dr. Beall joined the Institute staff three years ago, after serving the Canadian Department of Agriculture as statistical analyst. His training in this specialty was obtained at University College, London, internationally recognized for development of "statistical tools."

In this connection, T. A. Pascoe of Nekoosa-Edwards Paper Co., chairman of TAPPI's new statistics committee, stressed the importance of these courses to the industry and the "usefulness and power of the tools that have been developed in connection with statistical quality control."

A first-year course at Appleton deals particularly with the "rationale" of statistical methods and a third-year course with facility of application of techniques in experimental problems.

New Bird Screens

New equipment being installed at Powell River Co.'s mill in connection with the new newsprint machine:

Four No. 3A-100 Bird screens are being provided for head end of the new 226 inch paper machine which is being manufactured by Dominion Engineering Co. The capacity of each will be approximately 50 tons every 24 hours.

Eight Bird-Jonsson knotter screens in stainless steel construction are also being installed at Powell River, four for the sulfite and four for the groundwood mill. The capacity of each is about 100 tons per 24 hours.

Vickery doctors are being supplied, along with the other units mentioned, by Canadian Ingersoll-Rand, Ltd., for various rolls on the paper machine to keep the rolls clean.

KEEP YOUR EYES ON THESE LADS!
SOME FUTURE TOP COMPANY AND MILL EXECUTIVES are bound to come from this group if history repeats itself. For here is the 1947 entering class of the Institute of Paper Chemistry of Appleton, Wis., in a picture taken when they visited the sulfite and kraft mills of Nekoosa-Edwards Paper Co., at Nekoosa and Port Edwards, Wis., after touring the timberlands of Northern Wisconsin.

At left in picture is NEIL E. NASH, Vice President, Nekoosa-Edwards Paper Co., one of whose particular responsibilities is pulpwood production. Eighth person from left in back row is T. A. PASCOE, Technical Director of that company, prominent TAPPI leader. We're sorry we can't identify the young men individually but in the picture are Willard Carlson, Fort Dodge, Ia.; Richard Roberts, Milwaukee; James D. Wethern, Everett, Wash.; W. L. Ingmanson, Braintree, Mass.; John O. Edwards, Hamilton, N. Y.; Paul V. Greenfield, Decatur, Ill.; Edgar W. Miller, Cleveland; Frederick C. Keeney, Weslaco, Tex.; Paul E. Rogers, Washington, D. C.; R. C. MacPherson, Newton Centre, Mass.; Irwin L. Taylor, Detroit; John G. Leech, Norwood, Pa.; James R. Schoettler, Appleton; Robert L. Leaf, Jr., Appleton; John P. Daneman, Akron; and Malcolm N. May, Houston, Tex., with them are Irving H. Isenberg and Sidney Wells of the Institute staff.

ASHEVILLE MEETING

New Products and Processes Discussed

Asheville, which as "Land of the Sky" ranks as a Southern summer Mecca, was the scene (Oct. 9-11) of fruitful industry meetings in which discussions of production methods and problems were equally counterpointed by the graceful hospitality of Ecusta and Champion mill organizations.

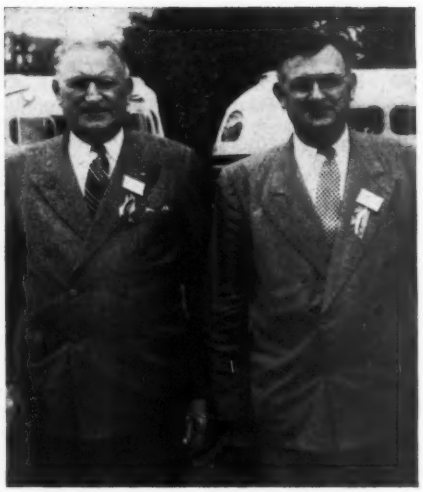
Here the Superintendents' Southern and Southeastern Divisions held a joint meeting as they did a year ago in Jacksonville, while TAPPI's alkaline pulping and chemical products committees held their third annual fall session.

But this was the first of these simultaneous meetings of TAPPI and Superintendent groups in the South, and, with this accomplished successfully, these contacts between the technical and management groups may be tried again in the Southern territory, where so few meetings of this kind have been held.

The value of the simultaneous meeting, already experienced in other regions, was lauded by both President Reuben B. Robertson of Champion and General Superintendent Raymond F. Bennett of Ecusta Paper Corp., president of the Superintendents' Association, at the closing banquet Saturday night. Mr. Robertson, also president of the American Pulp and Paper Association, was presented an honorary membership in the Superintendents' Association by Fred C. Boyce.

Mr. Robertson, speaker of the evening, said the United States must take leadership in the world whether we like it or not; that production must be kept high for some time to come; that we must aid Europe but must remember we cannot "donate ourselves into prosperity."

Mr. Robertson cautioned against excess in industry improvements, lauding the replacement of obsolescent equipment with that which is capable of self-liquidation in a relatively short time. He pointed to the possibility that the past sharp increases in per capita paper consumption here may not continue in the future.



HERE ARE THE KRUSE BROTHERS, both well over 6 ft. and big men figuratively, too, in the Southern association activities. HARRY J. KRUSE (left), of Albemarle Paper Mfg. Co., of Richmond, Va., was elected new Chairman of Southeastern Superintendents at Asheville meeting. His brother, FRED (right), is with Chesapeake Corp. of Virginia, West Point, Va., where he is Superintendent of the Board Mill.

Harry H. Straus, president of Ecusta, introduced the speaker. He was preceded on the program by W. F. Gillespie, technical director of Gaylord Container Corp., president of TAPPI. Homer H. Latimer, of Champion Paper and Fibre Co., Hamilton, O., past president of the superintendents, presided as toastmaster.

Close to 300 toured through the scenic Asheville country on mill visits to Champion's plant, at Canton, where they were served luncheon and to Ecusta Paper Corp., at Pisgah Forest. The tourists were intrigued by the spotless mill that produces two billion cigaret papers a day (one pound of paper equals 10,000 cigarets), its white-uniformed "cooks" and the room where flax bales are fed into rotated spherical digesters. For 120 ladies who came to Asheville with their delegate husbands, there was entertainment arranged by Mrs. Lee M. Bauer and Mrs. Harold Hansen.

The entire convention arrangements—including dinners and luncheons—worked so smoothly that the general committeemen—W. D. Harrison (chairman), F. V. Douett (co-chairman), R. F. Bennett, W. P. Lawrence, and Lee M. Bauer—must have spent many an hour in preparation. An important factor in everyone's enjoyment was the esprit de corps of the personnel at both Pisgah Forest and Canton.

BY-PRODUCTS MEETING

Speaking on the chemical products obtained on the Pacific Coast, H. K. Benson, recently retired head of the chemical and chemical engineering dpartments of the University of Washington, said that for some years Rayonier Incorporated at Shelton, Wash., manufactured "Raylig," trade name given to total solids obtained from spray-drying part of the calcium base sulfite liquor effluent. This company, he said, is now preparing to manufacture in commercial quantities an evaporated liquor from its ammonia base waste liquor. It will contain 40% to 50% solids, he said, and will serve in production of cements and adhesives. It will have a nitrogen content in place of calcium found in the former product.

Another chemical product he described is ethyl alcohol manufactured by the Puget Sound Pulp and Timber Company, Bellingham, Wash. Illustrations and a description of this plant were published in **PULP & PAPER** in its June, 1945, issue. This is made by the fermentation of the sugars in sulfite liquor. The capacity of

PARTICIPANTS IN ASHEVILLE meetings (left to right): President Ray Bennett of Superintendents Association (Ecusta Paper Corp.); Roland Wilbur, Southern Paperboard Corp., who was elected Third Vice Chairman of Southern Supts.; Tom Johnson, Union Bag & Paper Corp., who was elected Sec'y-Treas. of Southern Supts.; C. P. Spalding of Beloit, who described new paper machine (see article on these pages); George A. Thompson, Jr., of B. F. Perkins; Sterling O. Warner of Chromium Corp., and George Hardaker of Lockport Felt Co.

MORE PARTICIPANTS in Asheville meetings (left to right): W. F. Gillespie, President of TAPPI and Technical Director of Gaylord Container Corp.; Vernon Tipka, Bird Machine Co., Evanston, Ill.; Phil Hannan, Southern Advance Bag & Paper, who was elected First Vice Chairman of Southern Supts.; D. C. Metcalf, The Brown Paper Mill Co.; L. A. Thompson, Hercules Powder Co.; R. H. Stevens, National Container Corp., Florida Div., and A. J. Navarre, Orange Pulp & Paper Mills Co.

the plant is in excess of two million gallons annually of 190 proof alcohol, said Dr. Benson. There is now under construction a plant for the spray-drying of the effluent of the alcohol plant, Dr. Benson said, which will have capacity of 20 tons per day dry solids. This is a new product, in that it is largely free from carbohydrates, he explained. He also noted that Weyerhaeuser Timber Co., Longview, Wash., is using the bark of Douglas fir to make a number of products with the trade name of Silvacon (page 59, September **PULP & PAPER**). He described Palco products of the Pacific Lumber Co., Scotia, Calif., obtained from Redwood bark for industrial uses.

Other papers at the meeting were prepared by Dr. J. L. McCarthy, Hilda S. Daniels and Dr. Benson, all from the University of Washington where the most extensive studies in the world on possible practical disposal or use of sulfite liquor is being carried out, financed through joint participation of the pulp and paper mills of Washington State at a cost to the mills of $60,000 or more annually.

Results of further observations of tall oil, obtained from the sulfate process on Southern pine, were reported by W. H. Jennings of Camp Mfg. Co., who discussed seasonal variations. Paul R. Wiley of West Virginia Pulp & Paper Co., submitted a progress report on work being done to establish standards of analysis of tall oil (with ASTM). The physical tests have proven up. Chemical tests have been found erratic, with electro-metric methods showing less variation extremes than colorimetric.

A paper on extractive material from Southern pine, by C. C. Porter, Southland Paper Mills, was by title only, but Mr. Porter was attending. A report on utilization of scrub oak, by H. N. Calderwood and W. J. Nolan, University of Florida, was presented by the latter.

ALKALINE PULPING

Opening TAPPI's alkaline pulping session Saturday, L. D. McGlothlin, Crown Zellerbach's kraft superintendent at Camas, Wash., spoke on time pressure control for kraft digesters and consistency control between blow tank and washers (his papers follow this article).

In reporting results from a survey made of mill sewer sampling and analytical methods, R. R. Fuller, of Gulf States Paper Corp., said there is no standard method for testing samples, it being very difficult to set them up or to measure one mill against another.

In the face of insufficient reports on what sewers contain, and the entire study of sampling methods, he urged that unless greater interest in this problem is manifested the mills will find themselves living with methods prescribed by interests outside of the industry and standards set by people "who don't care whether we operate or not."

Results reported showed every kraft mill had some fiber and two-thirds of the mills have soda in the sewer, he said. One-half of one per cent is the average fiber loss for individual mills reporting, with 1½% or up to 2% of production. Loss of sodium sulfate averages 100 pounds per ton of paper, he said, adding that sewers run 40,000 to 50,000 gallons per ton of production from the combined pulp and paper mills.

Technical papers on stack gas sampling and analytical methods and of methods for determining oxygen demands of kraft mill waste were read. The latter, prepared by H. W. Gehm and William Maggio, National Council for Stream Improvement; the former by T. T. Collins, Jr., of Thilmany Pulp and Paper Co.

Less satisfactory results from full scale operation of the venturi scrubber for chemical dust recovery as compared to very promising pilot plant showings at the Thilmany mill in Wisconsin (see **PULP & PAPER'S** 1947 Review Number) were reported by Mr. Collins, who submitted a paper prepared jointly with C. R. Seaborne, vice president and general superintendent of Thilmany. The full-scale operation, which began in July, yielded 80% to 90% recovery as compared with 85% to 94% recovery on the venturi atomizer followed by a dry cyclone.

On the spray, there is a sump tank with continuous bleed-off operation at the bottom. The make-up on this operation runs from 12 to 15 gallons per minute, indicating some evaporation. Some corrosion was experienced in the nozzles and stainless steel is now being tried.

A pilot plant stage has been reached in the use of the venturi scrubber in which the disc or cascade evaporator is eliminated and the new installation placed back of the furnace.

Report on Cottrell Precipitators

Further interesting discussion of chemical recovery from furnace stack gases was presented by L. M. Roberts, whose paper, in which C. E. Beaver and W. H. Blessing collaborated (all three of Research Corp.), gave results of a survey of experience with Cottrell precipitators. Twenty-eight of these units built, building and contracted for, will handle six million cubic feet of stack gas in mills having an aggregate production of 13,000 tons of pulp daily. These installations are guaranteed for 90% dust removal, they said.

Thirty-eight units in 16 mills have been installed, with official tests completed in 12 mills showing design efficiencies met in every instance. Builders' tests revealed a power consumption range of from 2.8 to 6.25 KW hour per ton of pulp, including power for energization of the precipitator as well as other electrical appurtenances. Dust concentration on entering ranged from 1.7 to 6.8 grains per cubic foot dry gas and at outlet a range of from .06 to .35 grains.

Of mills replying to a questionnaire, one plant had no disc evaporators or spray

SOUTHERN SUPTS. ELECT OFFICERS

Officers elected for the coming year by Superintendents meetings at Asheville:

SOUTHERN DIVISION

Frank Jensen, Hollingsworth & Whitney Co.—Chairman.

Phil Hannan, Southern Advance Bag & Paper Co.—First Vice Chairman.

Andrew Downey, Florida Pulp & Paper Co.—Second Vice Chairman.

Roland Wilbur, Southern Paperboard Corp.—Third Vice Chairman.

T. C. Johnson, Union Bag & Paper Corp. —Secretary-Treasurer.

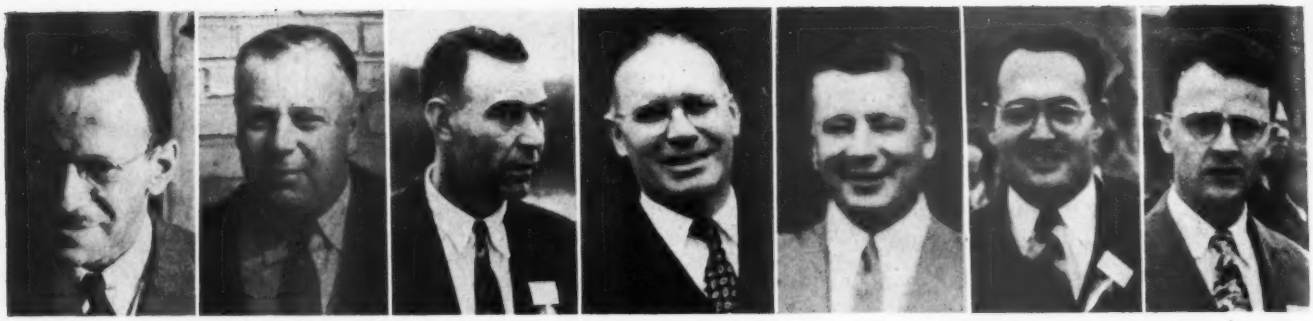
SOUTHEASTERN DIVISION

Harry J. Kruse, Albemarle Paper Mfg. Co.—Chairman.

Lee M. Bauer, Ecusta Paper Corp.—First Vice Chairman.

S. R. Brown, Bedford Pulp & Paper Co.—Second Vice Chairman.

Sam D. Hellberg, Camp Mfg. Co.—Secretary-Treasure.



MORE ASHEVILLE CONVENTION PARTICIPANTS (left to right): Lee M. Bauer, Ecusta Paper Corp., elected First Vice Chairman of Southeastern Division of Supts.; W. H. "Bill" Schlafge, Assistant Gen. Supt. of Paper Div., Minnesota & Ontario Paper Co.; L. D. McGlothlin, Kraft Mill Supt., Crown Zellerbach Corp., Camas, Wash., who gave two papers published in this issue; J. E. Kearney, Swenson Evaporator Co.; George Witham, Orr Felt & Blanket Co.; Tony Agronin, in charge of engineering, Shartle Bros.; R. F. Vokes, Dilts Machine Works, who led discussion on pulp preparation.

coolers, resulting in excessive temperatures. Excluding this plant, range of temperatures at inlet was from 260 to 320 degrees; at outlet, the drop in temperature amounted to from 5 degrees to 25 degrees F.

Based on average monthly returns recoveries ranged from 88 to 145 pounds per ton of pulp, an average of 118 pounds. This average based on a 250-ton mill with 350 operating days would yield a recovery of 4,900 tons. This figure base also includes the average availability of the Cottrell of 95% of mill operating time. This availability ranged from 94% to 98% and included war years.

SUPERINTENDENTS MEETING

Friction in bearings on machines because of lack of knowledge has been costly in the past and, with design going ahead, new ideas must also be incorporated in the maintenance program if full benefit is to be realized, H. C. Roane, assistant division manager of Bowser, Inc., Fort Wayne, Ind., told the superintendents.

Speaking on "care of anti-friction bearings on high-speed paper machines," Mr. Roane declared these are precision built and "cannot be expected to take a beating." They have close tolerances and highly polished surfaces susceptible to corrosion which requires protection from water. .

The speaker cited the nine "do's" for maintenance, emphasizing the need of consulting lubrication engineers, making regular check-ups of the bearing, and care of the oil. Discussion following the paper elicited from Mr. Roane the statement that 145 degrees is "ideal" temperature; that the most favorable range is 140 degrees to 150 degrees; that reasonable life for the oil may be expected even when temperature runs to 160 to 165 degrees when returning to the machine. Discussing moisture control, he spoke of the precipitation tanks' automatic temperature control.

A New Machine Described

Some of the features of one of the most recently installed Beloit machines in a Southeastern mill were outlined by Charles Spalding, sales engineer, Beloit Iron Works, who stressed there is no definite distinction between the pre-war and post-war machine as there has been a continuous development and improvement on paper machines rather than any basic change in method. Greater production, with higher speed must be provided for by design without sacrifice of quality.

The new post-war head box and slice is basically of the same design, but stainless steel lines the head box and the slice is "cleaned up" on the outside. The lip adjustments are much more accessible and there is an air motor lift rather than a hand lift on the slice, he said.

A stream flow or teardrop valve controlling flow of stock to distributor is so designed that the flow of stock through the valve is smooth and therefore the danger of forming lumps is minimized.

There is an excellent arrangement of couch helper drives, and also on top of press rolls of many of the larger high-speed machines with mechanical drives to relieve the load of belts and to minimize slippage between the top and bottom press rolls.

By incorporating a double area suction on the third roll, water can be held in the roll and the felt and sheet are brought off in a straight line, thus allowing higher speeds with less danger of breakage. The press is air-loaded by means of diaphragms. This gives the operator full control of the nip pressure at the front and back of the machine, and this nip pressure is indicated at all times by gauge readings. If desired, recording gauges may be used. Air loading is very elastic and there is much less chance of injury to felts or rolls in case of lumps than with spring or hydraulically loaded presses. The control panel mounted on the front of the press includes controls for air operated clutch on the drive, for nip control front and back, gauges and master switch for controlling the pressure, belt shifter control, and press felt stretcher control. The operator "stands still and punches buttons," he said.

Felt guides are air-operated. An air guide is provided for the suction presses. Since the Witham head on the guide roll operates against a light spring, the guide is very delicate and practically no felt tension is required on the Witham head, he said. The guide automatically seeks to position itself since when the Witham head calls for more air pressure in the guides the piston goes up, and as it goes up, it automatically releases the tension on the spring with the same position of the Witham head. One great advantage over the mechanical guide is that it will operate just as efficiently at any machine speed and eliminates mechanical troubles.

On the back of the new high-speed machine, the helical gears are of small diameter and completely enclosed to assure good lubrication and quiet running. The idler gears between the two main gears are mounted on roller bearings and are also completely enclosed in the housings. The combination of framing and gear housing affords a very rigid framework in the back where it is needed. The breaker stack has all its controls in the panel, and is air loaded.

The front of the reel has been cleaned up by using a panel control. Installation is simpler; control easier, said Mr. Spalding. With this panel the operator can control the air clutch, slack take-up on the reel drive, belt shifter, pressures on the air cylinders to control tightness on the roll, and movement of the transfer arms.

Frames for the winder have been redesigned for greater accessibility, and panel control provided. There is a motor operated vari-pitch V-belt drive between the drums and an air lift on the rider roll which, in conjunction with the air brake on the unwind stand, gives the operator full control of sheet tension. With a similar winder 9-inch counter rolls have been made at an average speed of less than 50 seconds.

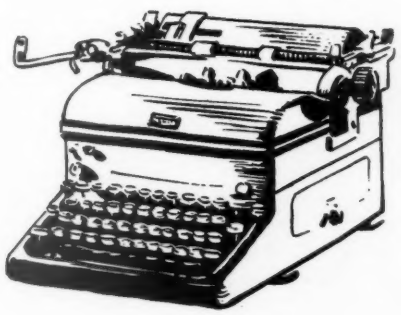
A discussion on drying developed following a paper by G. H. Young, Midwest Fulton Machine Co. He analyzed drying factors as (1) moisture content upon reaching driers, (2) steam pressure within the roll, and (3) surface contact between paper and roll. With pressures up to 160 degrees considered, he alluded to the theoretical rise in drying power as pressure increases, but laid special stress upon necessity of surface contact and clean rolls.

Discussion following revealed that kraft mills making board at high speed conducted tests involving vacuum on the couch and were surprised at the findings. At 1,100 feet of board the high stock factor on the suction rolls raised the vol-

Both are WRITING INSTRUMENTS

WHICH IS YOUR CHOICE for *EFFICIENCY, SPEED and ECONOMY?*

When you select a supply source for your fiber requirements and a distributor of your product, your decision should be equally easy . . . and important. Bulkley, Dunton's unexcelled service facilities, its leading worldwide connections, and long-accumulated experience are some of the many factors which influence mills to turn to this alert, progressive organization with their problems of pulp and paper distribution, purchase, and export.



BULKLEY-DUNTON ORGANIZATION

295 MADISON AVENUE, NEW YORK 17, N. Y.

In New England— **CARTER, RICE & CO. CORPORATION**

Offices and representatives in 59 cities in the United States, Latin America, Europe and the Far East.

AMONG THOSE AT ASHEVILLE MEETINGS (left to right): R. E. Phinney, Container Corp. of America (Fla.); O. C. Abbott, formerly of Seattle and now in Atlanta for The Bristol Co.; John Chandler, who covers the continent for Bristol; Robert Earl Jr., Earl Paint Corp.; Walter Glass, the "movie man" of F. C. Huyck & Sons; Gene Bechard of Atlanta and W. W. Henderson of Pensacola, each of whom represent several manufacturers in the South.

ume to 21 inches and resulted on an improvement on the driers. As a result a change had to be made to get more stock onto the rolls. Steam pressure was dropped and a speed-up of 50 pounds was made but these experiments had a high cost.

In connection with surface contact, a Yankee drier with the sheet "plastered" to the roll gets 10 times the drying effect than when there are air pockets between.

Mr. Young expressed the view that the difference between steel versus cast iron drier is not important, particularly when new; that the velocity might be higher on steel, but if steam is properly introduced and condensate removed, satisfactory results will be obtained.

Discussion as to the amount of dirtiness inside of a drier finally evoked a report that a roll in service 40 years had been opened (end out) and what was on the inside of the shell virtually wiped off with the hand. The modern trend toward careful boiler water treatment in combination with turbines rather than reciprocating engines (eliminating lubricating oil) to all practical purposes eliminates what might have reached driers under old conditions.

Industrial Relations

Development of the industrial relations department as a normal result of large-scale operations, just as accounting, maintenance and technical staff have been developed, was covered in a paper by Dr. Larry W. Ross, personnel analyst, Union Bag & Paper Corp.

He emphasized that the functions performed by the department aid the superintendent, and do not detract from his ultimate responsibility. One function is to introduce a certain measure of depersonalized action between the employe and his direct production supervision.

A general discussion developed in a symposium on stock preparation, originally brought forward in talks by G. A. Hermann (The Hermann Mfg. Co.), Dwight E. Jones (E. D. Jones & Sons Co.), Tony Agronin (Shartle Bros. Machine Co.), and Douglas G. Sutherland (Sutherland Refiner Corp.). R. F. Vokes (Dilts Machine Works) served as moderator. Each spoke briefly on refining, emphasizing certain treatment.

The superintendents evidenced great interest in the talks, and the ensuing discussions. A good many questions were asked about brown stock refining and of refining before bleaching. A new and improved installation on brown refining at a Louisiana mill was mentioned.

Also injected was the question of stainless steel, one answer being that this could be obtained in either a cutting or brushing quality. Reversing of the jordan was recommended for maintaining edges.

The superintendents were told equipment manufacturers could perform a greater service for the mills if they knew what kind of pulp goes into refining machinery.

On Thursday evening, moving pictures showing woodlands operations were shown by W. L. Glass, of F. C. Huyck & Sons Co., and the machine knife industry, by Simonds Saw & Steel Co.

Need for closer analyzation of slime damage costs was stressed by Frank S. McCall, of Union Bag and Paper Corp., in the Saturday session. In estimating damage from slime, he averred, too much attention is paid to the most obvious—shut down time. At Union Bag & Paper, a study is being made to determine losses classified in seven categories.

An interesting motion picture of Ecusta Paper Corp.'s annual picnic constituted a colorful part of a paper on "Value of a Recreational Program in Industrial Relations," given by John Eversman, of that company.

Other entertainment — a magician's show put on by George Witham (Orr Felt & Blanket), assisted by Ralph P. Abercrombie (Cheney Bigelow Wire Works), J. N. Raines (Lindsay Wire Weaving Co.), and R. E. Harter (Vanderbilt).

CONSISTENCY CONTROL

By L. D. McGlothlin

Kraft Mill Supt., Crown Zellerbach Corp., Camas. (Paper given at TAPPI Asheville meeting, Oct. 11).

ONE OF THE FIRST PREREQUISITES of good, efficient washing on vacuum washers is the maintenance of uniform sheet or cake thickness on the drum filters—this can only be accomplished with good pumping equipment and consistency control.

For the best results a pump with a large diameter impeller and slow speed motor, preferably variable speed, should be used to pump only the desired amount of stock without overflow back to the blow tank or without valve throttling.

The stock coming from the digesters usually has a consistency of about 15 per cent and is very free. It is the practice to add weak liquor to the stock at this stage to reduce the consistency so that it may be properly handled by the pumps and delivered to the washers.

Prior to pumping, it is necessary to provide consistency control which will be highly sensitive to change and will operate automatically and efficiently to maintain a uniform predetermined consistency in the stock preparatory to its being pumped to the washers.

The following brief description will explain an effective means of consistency control:

The device includes a closed main tank, with inlet at the bottom and outlet at the top through which the stock flows to the pump. The black liquor for dilution is delivered into the tank through several inlet branch pipes from a main header. These branch inlet pipes connect with the tank at different levels and each inlet pipe is controlled by a separate hand valve, thus the incoming diluting liquor can be distributed in equal amounts simultaneously at different levels, as desired, or the comparative rate of distribution at different levels in the tank can be modified.

A series of baffles extend horizontally within the tank. These baffles are arranged in pairs at different horizontal levels and the corresponding baffles of each pair are arranged in vertical alignment. Thus, these baffles form two vertical rows. However, these two rows are not diametrically opposite each other. While the baffles extend in horizontal direction, the upper faces of the baffles are inclined so as to form dihedral angles with the horizontal planes in which the lower edges of the baffles lie. The inner end of each baffle is supported by a horizontal brace to the tank wall.

A vertical shaft centrally located within the tank extends upward through the top of the tank. An anti-friction bearing at the top supports the weight of the shaft assembly. A plain bearing at the bottom serves merely as a guide.

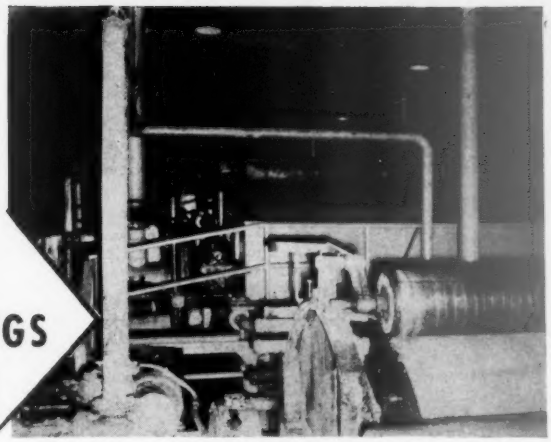
At spaced intervals on the shaft within the tank, paddle blades are mounted. The paddle blades are arranged in pairs, each pair forming a horizontal cross arm on the shaft. All the blades are the same size and shape each blade having a front face constituting a vertical plane surface.

Unlike the baffles, the respective blades of the pairs are not in vertical alignment, but are staggered around the shaft in vertical sequence in 45 degree steps. Each pair of blades is placed a short distance below a pair of stationary baffles. The upper face of the baffles are so arranged that they will engage the stock when rotated in one direction by the blades, producing a mixing and rotary motion.

Due to the fact that the baffles of each

Washers at St. Joe—

Ten years ago they installed OLIVER-YOUNGS



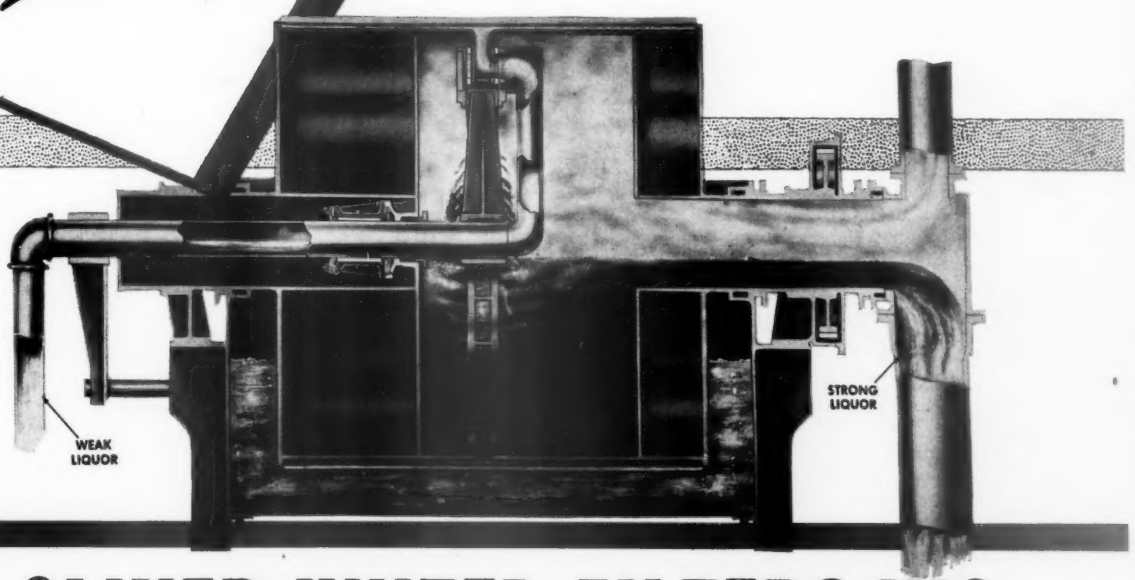
Those Oliver-Youngs are certainly doing good work. Two lines of three each in series are handling upwards of 420 tons of board stock per 24 hours with soda loss as low as 17 pounds and averaging around 27 pounds per ton.

But good as these Oliver-Youngs are, Oliver Ringvalves are even better. The management at St. Joe Paper Company feels that after ten years of service it is time to replace with more modern washers. Hence the order for 6 Oliver Ringvalves.

During the past few years many mills have bought Oliver Ringvalve Washers. They have recognized its many-sided superiority. Numerous repeat orders have come in.

Any mill today planning to improve its pulp washing department should investigate thoroughly the Oliver Ringvalve Filter. It has so much to offer in the way of economy, efficiency, simplicity and versatility.

Today they have on order 6 OLIVER *Ringvalves*



OLIVER UNITED FILTERS INC.

New York 18, N. Y.
33 West 42nd Street

San Francisco 11
California

Chicago 1, Ill.
221 N. LaSalle St.

Western Sales Division
Oakland 1, Calif.
2900 Glascock Street

Sales & Manufacturing Representative: E. Long Limited—Orillia, Canada

Factories: Oakland, Calif.—Hazleton, Pa.—Orillia, Canada—Melbourne, Australia

ASHEVILLE CONVENTION group (left to right): CHARLES VENART, Southern Paperboard Corp.; C. P. KIRCHEN, Buckman Laboratories Inc.; J. L. ALEXANDER, Ecusta Paper Corp.; R. E. NOREUS, The Northwest Paper Co.; H. A. MORRISON, Oliver United Filter Inc.; ROY P. HELLA, The Northwest Paper Co., and J. F. SMATHERS, Champion Paper & Fibre Co. Mr. Noreus and Mr. Hella came from one of the farthest north mills of the U. S.—The Northwest Paper Co. is at Cloquet, Minn.

pair are not diametrically opposite each other and to the staggered angular relationships of the different set of paddles on the shaft, no two paddles come into vertical alignment with any of the baffles simultaneously. This arrangement distributes the resistance to the rotation of the shaft and paddles evenly throughout each complete revolution. Consequently the stock will not only be mixed but will also be moved upward from the bottom of the tank until it reaches the outlet pipe through which it is drawn by a pump. During this mixing and lifting of the stock in the tank, additional liquor is admitted to various levels and in controlled amounts to bring the stock down to the desired predetermined lower consistency.

The shaft, with paddles attached, is rotated from a motor through a chain of gears or gear motor, the motor being only of sufficient h.p. to drive the mechanism operating at near full load.

The electric power for operating the motor used to rotate the paddles in the tank is delivered through a thermocouple watt motor, which serves to convert wattage to millivoltage. This in turn actuates an automatically balancing potentiometer which operates a pilot air valve controlling a diaphragm valve throttling the dilution liquor. This valve, delivers black liquor to any or all dilution inlets for stock consistency control.

In a consistency controller it is advantageous to keep dilution at the point of control to a minimum. The dilution from the blow tank to the washers is about five-fold. While the controller will handle this degree of dilution automatically, we have found it desirable and practical to reduce the load on the motor by diluting about one-half way in the blow tank with manual control. This makes the automatic control more sensitive and the diluted stock more uniform in consistency.

Our Douglas fir stock presents a problem in foam control. It may not compare with Southern pine in this respect, but still we must exercise every reasonable precaution. As any operator in a mill using pine knows, entrainment of air in the system must be avoided, and whipping of the stock as in a small high speed pump will create a problem. This controller being totally enclosed and under pressure cannot add air to the stock, and the movement of the paddles being slow will not whip up foam from any air that may already be in the stock.

Further mechanical advantages of the tank in the line are—first, it will act as a trap for tramp iron which can be removed at periodic shut-downs; and second the tank being totally enclosed may be easily kept clean and cannot cause overflow.

A NEW PRESSURE CONTROL For Rotary Digesters

By L. D. McGlothlin

Kraft Mill Supt., Crown Zellerbach Corp., Camas. (Paper given at TAPPI Asheville meeting, Oct. 11).

THE NEED of accurate and dependable control of the time-temperature cycle on any digester is necessary if uniform pulp is to be produced. Fitting a satisfactory control to a rotary kraft digester has presented many engineering and maintenance difficulties.

First of all, a short cooking cycle due to high liquor concentration has made accurate control imperative. Second, the low volume of steam per cook due to the characteristic small size of the rotary vessel and to the low volume of liquor to be heated, has imposed close tolerances as to flow control on the instrument. Third, the mechanics of fitting a stationary indicator to a rotary pressure vessel have proved more difficult than anticipated.

At any rate, the development of a satisfactory system has required a number of years' time and the advice and effort of many people. In the course of the development, a number of widely different installations were tried and discarded for various reasons.

The first attempt was to place a stationary thermometer bulb in a hollow rotating trunnion. This required a packing gland on the outer end of the trunnion. This joint required continuous maintenance, and sooner or later the packing seized the rather fragile bulb and tore it loose from the instrument.

In order to eliminate the packing gland, the inner end of the trunnion was closed and the thermometer placed in an oil bath which required only a loose packing. Mechanically this was successful, but excessive temperature lag made the system completely impractical.

The next step in the development was the application of steam flow control. Here the small digester size and low liquor volumes proved too critical for the system. Any small fluctuation in conditions such as a change in steam supply pressure, a little too much gas-off, a change of wetter wood (to name a few) would throw the final pressure off by as much as ten pounds, and the temperature by a like amount. A home-made improvement was the addition of top pressure cut-out. The steam flow time was purposely lengthened to take care of any contingencies, and the top pressure cut-out stopped the flow at the proper pressure. This system had three principal faults; first, there was maintenance of numerous instruments; second, there were a number of inaccuracies seemingly inherent in the system; and third, and most important, there was no way of getting the cook to a given point on the curve at a given time consistently, so that the digester cook was continually making estimated adjustments of cooking in a cycle so short that minutes counted.

About this time an installation of resistance thermometers with external slip-ring take-offs was considered. No instrument company contacted would encourage the idea, and one even refused to make a proposal. In the face of such consistent discouragement the plan was never tried.

The present system utilizes time cycle pressure control with a continuous re-setting feature on the pressure controller. A time cycle cam is operated by a four-hour clock. A linkage system from cam rider continuously repositions the control arm of the pressure controller according to the predetermined cycle. A typical diaphragm valve is operated by the controller. Digester pressure is transmitted to the recorder through an iron pipe inserted through the trunnion and rotating with it. A balanced packed joint joins the rotating pipe to the stationary system. The pipe in the trunnion occasionally plugs with stock and requires flushing. This is done at any time by means of a high pressure water line.

In a kraft digester pressure follows temperature accurately once the cook has been thoroughly relieved. Thus, by controlling pressure we are actually controlling temperature, which is the true critical variable in the cook. With the system outlined above, the unpredictable fluctuations in conditions such as already mentioned are compensated for as soon as encountered within capacity limit of the diaphragm valve on the steam supply. Rate of steaming is not necessarily constant, but within close limits the rate of pressure rise is duplicated in successive cooks. The digester cooks no longer need to compensate for a lagging temperature nor hold back on too rapid a rise. It is obvious that this relieves them of considerable operating detail as well as eliminates the human element in this important phase of cooking.

At one time the pressure pipe in the trunnion corroded out, and as an emergency measure the pressure recorder-controller was connected to the steam supply on the digester side of the diaphragm valve. Since the pressure in this line is higher than that in the digester except at top pressure a new cam was cut to compensate for pressure drop where the steam enters the digesters. It was found that there is apparently a direct relationship between the pressure in the pipe and in the digester. At any rate the emergency measure operated in an entirely satisfactory manner without loss of production or quality until the regular system could be replaced at the next regular shut down.

The time-cycle pressure control system on the rotary digester is the simplest one that has been installed with regard to amount of equipment, and amount and type of maintenance. However, as so often happens, the simplest system has proved the most satisfactory in operation.

HERE'S A PULP & PAPER "exclusive" snapped at the recent Murray Bay, Que., New York-Canadian Superintendents convention. The "squaw" at left is JOE MacLAREN of MacLaren Paper Co., Glens Falls, N. Y. In center is JEAN PAUL ROLLAND, General Manager of Rolland Paper Co., who completed his term as Chairman of the N. Y.-Canadian division. At right is "HURRY-HURRY" MURRAY BENNETT, of Stebbins Engineering & Mfg. Co., Watertown, N. Y.

PAPER · · · America's 6th Industry

PAPER CORDS FOR MONDAY'S WASH

(NEWS ITEM: *Special-treated paper cords are being manufactured into clotheslines.*)

Here is longer life for family clotheslines—special-treated paper cords that actually last ten times as long as ordinary lines. Made of kraftcord with a steel center, this new type clothesline is coated with a plastic resin and will not stretch or sag. Paper clotheslines remain unaffected by weather conditions; will not rot. Can be wiped clean with a damp cloth.

Further information on this new paper product may be obtained from manufacturer's leaflet which we will furnish on request.

Paper paint cans . . . paper draperies . . . dusting paper . . . paper wash cloths . . . New uses for paper calling for new standards of lightness and toughness, new standards of quality in performance. New responsibilities—new opportunities for the Pulp and Paper Industry.

The Puseyjones Organization is now devoting itself completely to the design and construction of Paper-Making Machinery built to new high standards of speed and efficiency, and to the modernization of existing machines.

Among the new machines under construction by Puseyjones are three of the largest and fastest Fourdrinier Machines, including one for Kraft paper for multi-wall bags; also one Cylinder Machine of record size and speed for the manufacture of floor covering felt. Other machines are under construction for the manufacture of M. G. Kraft specialties, facial tissues, and high grade bristols.

Puseyjones Engineers will welcome the opportunity to work with you in solving production problems.

THE PUSEY AND JONES CORPORATION
Established 1848. Builders of Paper-Making Machinery
Wilmington 99, Delaware, U. S. A.

PROGRAM FOR FINANCING

Alabama Paper Mill

Here's the program for financing the 350-tons per day $30,000,000 newsprint mill projected for construction by Coosa River Newsprint Co. at Childersburg, Ala., Arsenal (also will make 250 tons of bleached kraft pulp, serving new Kimberly-Clark Memphis tissue mill):

1. Government lease will cover land, power and water plant.

2. Preferred stock of $5,000,000 will be issued.

3. Common stock of $10,000,000 will be issued of which Kimberly-Clark Corp., the chosen operators, will take $2,500,000.

4. The newspaper publishers of the South will keep 51% in their own hands, the rest being offered the public and if 5% on common is not earned after two years, the Kimberly-Clark contract will be up for review.

5. A bank loan of $15,000,000.

6. Kimberly-Clark will receive an operative fee of $200,000 per year.

The above is revealed in the report of Clarence B. Hanson, Jr., publisher, Birmingham (Ala.) News - Age - Herald, chairman of the Southern Newspaper Publishers' Association newsprint committee.

Members of SNPA's committee includes (in addition to Mr. Hanson) Frank Daniels, Raleigh (N.C.) Observors; John F. Tims, Jr., New Orleans (La.) Times-Picayune; E. K. Gaylord, Oklahoma City (Okla.) Times; James G. Stahlman, Nashville (Tenn.) Banner; Ted Dealey, Dallas (Texas) News; James L. Knight, Miami (Fla.) Herald, and J. D. Wise, Richmond (Va.) Times-Dispatch.

Full details of the set-up and plans for the big newsprint mill were given in the following committee report:

"In the 12 months since the newsprint mills committee made its last accounting, the Coosa River Newsprint Co. has developed to the point where this company, and the committee have become almost synonomous terms. The chairman of the committee is also vice president and director of the Coosa River Co. and one of the three members of its executive committee, which has largely carried on the company's affairs.

"The Coosa River Newsprint Co. was organized under the laws of Alabama in March, 1946. At the time of the Biloxi convention in September, 1946, the Company was working on the three big steps necessary to bring its activities to a successful conclusion. As far as possible these steps have been taken concurrently. The three principal problems were:

"1. The negotiation of arrangements with the War Department, which would not only be of advantage and fair to the people of the United States, but which as well would give the company the facilities and rights essential to its enterprise.

"2. To see to the design and building of the world's most modern and efficient mill and to secure the most competent possible technical management for the mill.

"3. To arrange for the financing of this $30,000,000 enterprise in a way that would give Southern capital and Southern newspaper publishers substantial control of the mill's affairs in perpetuity.

"The real purpose of this report, therefore, is to inform Southern publishers of the degree of accomplishment of these three major tasks.

"After months of effort we finally negotiated an agreement with the U. S. government which accomplished what we set out to accomplish. The lease as finally negotiated was divided into two parts. The first part covers the lease of 615 acres of land with the option on the part of the company to purchase this land for $30,750. This option is to be exercised in the near future. The second part of this lease is a long and complicated document which amply protects the interests of both the United States and Coosa River. In the briefest terms, this document leases to the company for five years, with option of seven additional consecutive five-year renewals, for an annual rental of $50,000, a twenty-five million gallon a day water filtration plant, a twenty-five thousand kilowatt steam generator plant, plus various process steam boilers, miles of four-lane paved highway, fourteen miles of railroad track, a large Diesel locomotive, plus additional assets and rights.

"The government agreed to confine its recapture rights under the lease to the product of these utilities. On the basis of the government's use in World War II there is enough water and steam for both the government at its peak production and the new mill at its peak production. Additional power, if needed, will be furnished to the company for the entire life of the lease by the Alabama Power Co. The government further agrees that if it recaptures more steam and water than it used in the last war and this action of the government results in the shutting down or curtailment of the operation of the mill, it will pay the loss caused thereby not to exceed interest on funded debt, taxes and insurance.

"In negotiating for management, manufacturers long established in the paper business realized early in our activities that the company was likely to negotiate such an arrangement with the government and otherwise to have such a strong strategic position that its operation was almost sure to be highly profitable. For that reason the company very soon found several strong and well-established manufacturers interested in joining with us.

"Coosa River Co.'s officers finally decided to go along with Kimberly-Clark Corp., of Neenah, Wis. The contract covering the management of this mill is also a complicated document and, as in the case of the government lease, the contract is of great benefit to both parties. In brief, Kimberly-Clark is purchasing 25% of the company's common stock, is seeing to the design and erection of the mill, and on its completion will undertake its complete technical management from tree in the forest to your press rooms. This management is on a fixed fee basis covering everything, including sales. The amount of the entire fee is very much less than a paper company would normally spend for sales alone. Kimberly-Clarke will have 25% of the company's board and 25% of the executive committee of four directors. Their fee is after the first two years $200,000 annually.

"The contract provides in effect, that if the company fails to earn net after taxes and available for dividends on common stock an amount equal to 5% on money paid in on common stock for two consecutive years, the company shall have the right to review the contract with Kimberly-Clark. This gives assurance of not only fine earnings on invested capital, but also guarantees a fine product, for such earnings could not be forthcoming without proper quality of paper.

"The remaining problem, that of finance, is well under way. Negotiations have proceeded to the point where we are confident of borrowing $15,000,000, or one-half the estimated required investment, at a reasonable rate. It is planned to issue $5,000,000 in preferred stock, leaving $10,000,000 of common stock equity money to be raised. Of this amount, Kimberly-Clark has already agreed to put in $2,500,000, and will assist in raising additional amounts. It is however, of the utmost importance that for the Birmingham group and the publisher group between them to raise more than half of the equity capital to assure that control of the enterprise remain in the South.

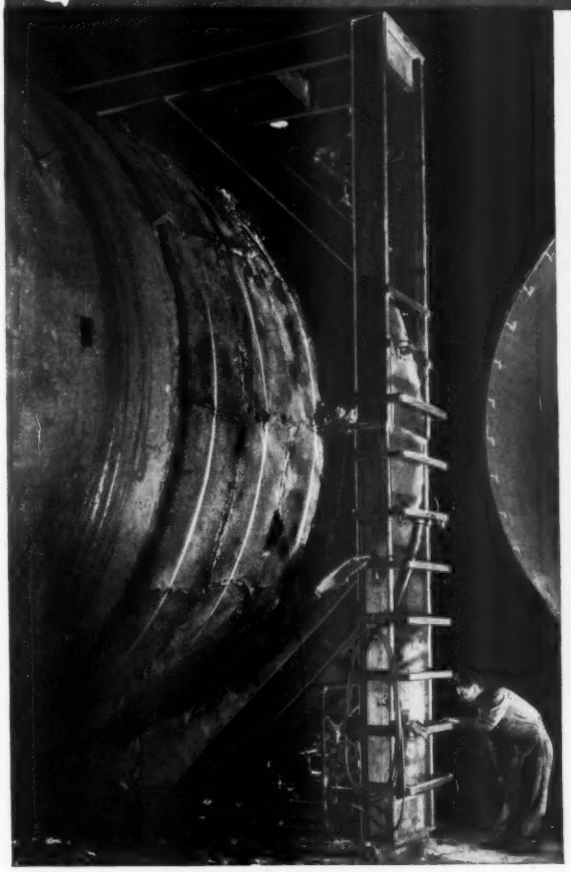
"The company is requesting an opinion from S. E. C. counsel that the company may legally offer stock privately to a limited group of publishers. We are now in the process of preparing to register the company's securities for sale generally. In the future stock will be offered to all Southern publishers as well as to the general public. It is contemplated that the sale of stock to publishers will be tied in directly to contracts for tonnage, be-

VESSEL DIVISION

NEWS

A. O. SMITH Corporation

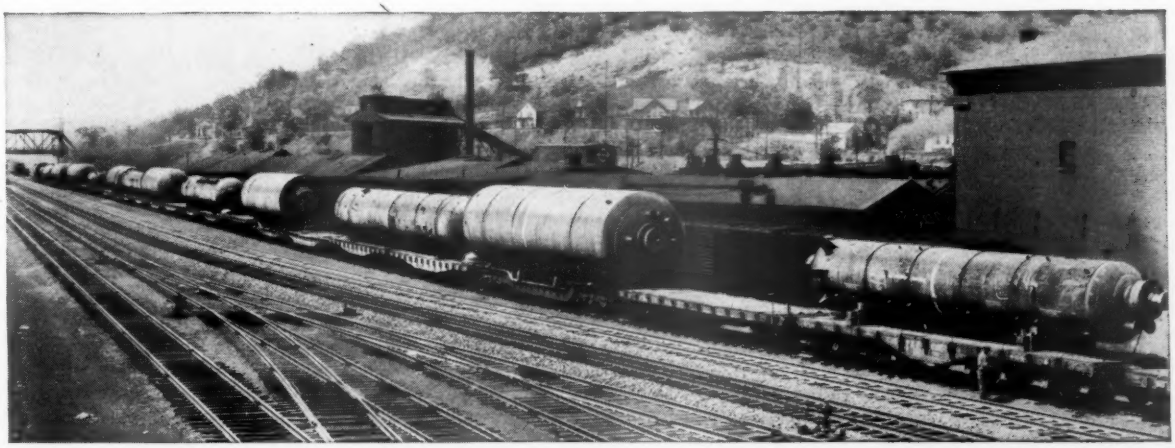
New York 17 • Philadelphia 5 • Pittsburgh 19 • Atlanta 3 • Chicago 4
Tulsa 3 • Houston 2 • Seattle 1 • Los Angeles 14
International Division: Milwaukee 1



STRESS-ANNEALING BY THE INCH! (*above*) When a vessel is too long, or its diameter too great, to fit into one of the monster A.O. Smith furnaces, the engineers devise a portable furnace and stress-anneal section by section and the final closing seam.

MILLION ELECTRODE MAN. (*above*) In his twenty-one years of painstaking welding on SMITHway pressure vessels, John Binder has used up 975,744 SMITHway electrodes—at last count!

PEFINERY ON WHEELS! (*below*) Not long ago this train pulled out of the A. O. Smith yards bearing almost the entire vessel equipment for a completely new refinery unit. The single shipment included coking drums, fractionating towers, stripping columns, flash chambers and coke chambers.



IN INDUSTRY NEWS THIS PAST MONTH (left to right):
ARTHUR G. WAKEMAN, who has been selected as Vice President and General Manager of new Coos River Newsprint Co., whose pulp and paper mill costing $30,000,000, will be built at Childersburg, Ala. Kimberly-Clark Corp., in which Mr. Wakeman has been a prominent executive, will have a 25% interest in this mill and will operate for Southern publishers. Pulp from this mill will supply the new Memphis cellulose wadding mill of Kimberly-Clark.
S. L. DE CARTERET, formerly Vice President, who has been elected President of Canadian International Paper Co., Montreal, succeeding John L. Hinman, who becomes Chairman of Board. Mr. de Carteret is also President of Canadian P & P Assn.

ALBERT E. BACHMAN, Supt. of Mississiquoi Corp., Sheldon Springs, Vt., who was elected new Chairman of Northeastern Division of Superintendents Association at recent Poland Springs, Me., fall meeting. Mr. Bachman is Executive Committeeman of TAPPI also and is in line for high national honors in TAPPI organization, also.

GEORGE M. PENNOCK, who has been prominent in paper machine manufacturing field for 31 years, joins The Moore & White Co. as Executive Engineer, according to George Lear, President of that custom-machinery firm of Philadelphia. Since the age of 20, Mr. Pennosck had been with Bagley & Sewell in Watertown, N. Y.
BLAKE HONEYMAN, who has joined Morden Machines Co., Portland, Ore., as Sales-Manager. Born in St. Paul and raised in Chicago, he went to Pacific Coast a number of years ago. He was formerly with Koppers Co. and Oregon Brass Works. He will work on new engineering development with C. W. Morden, President, and later will serve as direct representative of Morden firm, visiting mills.
PHILIP L. SCOWEN, formerly General Manager of Brompton Pulp & Paper Co., has been appointed President of Perkins Tissue Mills in Montreal.
MARTIN F. SCHNAUFER, appointed Chief Engineer of Detroit Sulphite Pulp & Paper Co., Detroit, Mich., succeeding Mr. Ernst Gschwender, who recently retired after almost 34 years' service with the company, according to G. N. Carleton, President. Mr. Schnaufer has been with Detroit Sulphite for seven years.

cause the fact should not be lost sight of that at the inception of this project the Southern Newspaper Publishers' Association through its newsprint mill committee guaranteed to the Coosa River Newsprint Co. that its entire tonnage of newsprint would be contracted for prior to the company's commencement of production. The precise relationship of stock purchase to tonnage has not yet been worked out. In that connection it should be emphasized, however, that all publishers, regardless of size, location, or previous relationship to the development of this project will be treated exactly alike and further that all investors in the mill will buy the securities at exactly the same price, terms, and condition as any other purchaser."

Arthur Wakeman Heads New Alabama Mill

Arthur G. Wakeman, prominent in the industry for a quarter-century and who was director of the Pulp and Paper Division, War Production Board during war years, has been selected to serve as vice president and general manager of the $30,000,000 newsprint and pulp mill of Coosa River Newsprint Co. at Childerburg, Alabama. Mr. Wakeman will be in charge of design and construction, and afterwards direct the operation.

Announcement of Mr. Wakeman's election to the position was made by Edward L. Norton, company president, following a meeting of the directors under Donald Comer, chairman of the board.

Mr. Norton also announced that William E. Hornbeck will serve as resident manager of the newsprint mill and Howard Neubauer as office manager.

A contract was signed with J. E. Sirrine & Company, Greenville, N. C., for engineering and design of the new mill. Preliminary operations to construction of the mill at Childersburg have started.

Mr. Wakeman brings to the Coosa company a wide version in the international situation. In 1944 he spent the winter in London at the U. S. Embassy on the Mission of Economic Affairs. Subsequent to V-E Day he helped make a survey for the army of the European pulp and paper industry. Since 1945 he has been employed by Kimberly-Clark Corp. in connection with its multi-million dollar expansion program in this country and Canada. Kimberly-Clark will operate the newsprint mill and has a part interest.

New Alcohol Plant For Sulfite Mill

Sulfite effluent from the Gatineau mill of Canadian International Paper Co. near Ottawa will be converted into industrial alcohol in a $2,500,000 plant to be operated by Commercial Alcohols, Ltd., of Montreal, according to H. C. Kerman, general manager of the latter company.

The plant will produce about 2,000,000 imperial gallons of ethyl alcohol a year from some of the effluent poured into the Ottawa River.

The Gatineau plant will have the largest sulfite capacity in the world, said Mr. Kerman. It will be the third plant of its kind on the continent, the others being at Thorold, Ont., and Bellingham, Wash. A maximum of 700,000 gallons of sulfite liquor will be processed every 24 hours by a variation of a process developed in Sweden, combined with improvements worked out by engineers on this continent. A vacuum distillation method will be one of the features. Stainless steel will figure extensively in its construction.

EDWARD L. NORTON, president of the Coosa River Newsprint Co., which is to build a $30,000,000 pulp and paper mill at Childersburg, Ala., was a recent visitor to the LongLac Pulp & Paper Co.'s pulp mill project at Terrace Bay, Ont., and to the K-C mill at Kapuskasing, Ont. He was accompanied by K-C officials.

P. H. Scowen Becomes Head of Montreal

P. H. Scowen, for 25 years associated with Brompton Pulp & Paper Co., from which he retired in 1946, has been appointed president of Perkins Tissue Mills, Ltd., Montreal.

Vice president and general manager is Charles P. de Volpi, who has been with Perkins Tissue Mills since 1930.

Perkins Tissue Mills, Ltd., was incorporated in Canada in 1930 by B. F. Perkins and J. L. Perkins of the American Tissue Mills, Holyoke, Mass., for the purpose of converting paper into products similar to those made in the United States by the parent company—printed and plain waxed papers, paper napkins, crepe papers, gift wrapping papers, shelf papers etc.

The comany, whose plant is located at 424 Guy Street, Montreal, manufacturers the most diversified line of paper products in Canada.

The American Tissue Mills sold their interest in the company in 1935 to George C. Watson, Holyoke, Mass., and the common stock of the Perkins Tissue Mills was purchased from him in July, 1947, by a newly formed company, Perkins Paper Products, Ltd., which will handle the output of Perkins Tissue Mills.

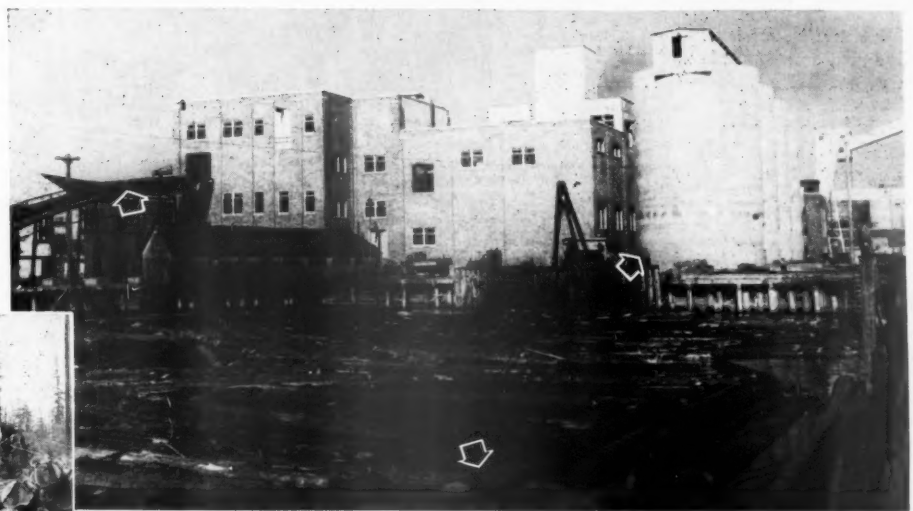
Flox Companies Merge

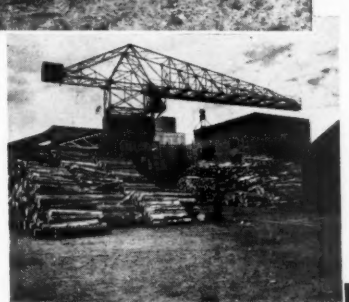
The Flox Company, an Oregon partnership formerly composed of C. S. Childs and R. B. Beal, with main offices in Portland, Ore., has been purchased by a corporation, The Flox Company, Inc., which has been conducting a similar business in the Middle West since 1926.

Mr. Childs is chairman and Mr. Beal is president of The Flox Company, Inc., which has it main office at 1409 Willow St., Minneapolis 4. A branch office will be maintained at 1132 N.W. Glisan St., Portland, Ore., with O. L. Hudrlik in charge.

ISAACSON *belongs* in the Pulp and Logging Picture

NEW BELLINGHAM PLANT of PUGET SOUND PULP & TIMBER CO.





FROM THE LOGGING TO THE STRUCTURAL STEEL FABRICATION YOU'LL FIND ISAACSON PRODUCTS SERVING THE PULP INDUSTRY

Step by step, in the Puget Sound Pulp & Timber Company's successful fight against waste, Isaacson products belong in the picture: Isaacson steel buckets quickly unload small logs to inventory . . . Non-clogging feeder plates by Isaacson carry chips to digesters . . . The structural steel work in their Bellingham plant's huge chip storage silos . . . exceedingly effective uses of structural steel in the log haul, the conveyor galleries, and a new type of suspended chip bin bottoms . . . these and other structural assemblies that typify the trend toward more permanent construction and wider use of steel in modern pulp and sawmill plants . . . all are products of Isaacson engineering "know-how" and Isaacson fabricating skill. The name ISAACSON stands for leadership in steel fabrication just as Puget Sound Pulp & Timber stands for leadership in the maximum use of pulp wood.

ISAACSON
Iron Works
SEATTLE

Personals

PACIFIC COAST

LAWSON TURCOTTE, executive vice president of the Puget Sound Pulp and Timber Co. was recently selected to serve on the American-Canadian Relations Committee of the Chamber of Commerce of the United States. This new honor comes to Mr. Turcotte following his being president of the Bellingham Chamber of Commerce for 1946.

IT MUST REALLY be news when a regional office of a company breaks into the export business! While traveling around the Washington state pulp mills, Don Meissner, field representative for Fairbanks, Morse & Co., be-friended a visiting mill executive from Finland. A few months later he received a substantial order for motors for a Finnish paper mill.

MISS MARIAN E. SUTHERLAND returned Oct. 1 to her post as secretary to Vice President Frank Youngman of Crown Zellerbach Corp., Portland, Ore., after a year of leave with the European Air Transport Service, during which she saw most of the countries of Europe.

R. E. deLOPEZ, traffic manager of Puget Sound Pulp and Timber Co., is now back at his desk after a lengthy illness which had him in Bellingham and Portland, Ore., hospitals.

HENRY DENNIS, logging manager for Soundview Pulp Co., was elected a vice president of the company at the directors' meeting last month. U. M. Dickey is president and other vice presidents are Harry Fair, Leo S. Burdon and R. M. Buckley. Walter A. Starr of San Francisco is chairman.

SAM T. ORTON, JR., general manager of Union Screen Plate Co., recently toured Northwest mills with John Fulton, Ed Tidland and Tom Scarfone of Pacific Coast Supply Co.

A. E. MONTGOMERY, vice president and western manager of the J. O. Ross Engineering Corporation, Chicago, accompanied by *R. W. MORSCH,* newly appointed manager of J. O. Ross Engineering Corporation's Los Angeles office, visited the pulp and paper mills on the Pacific Coast the latter part of September and early October. It was their first visit together to many of the mills since Mr. Morsch moved to the coast early this year.

HOWARD HOFFMAN, industrial engineer of Western Waxed Paper Co., division of Crown Zellerbach Corp., Portland, Ore., was married to Mary Elinor Wells in San Francisco. Mr. Hoffman, son of Ralph Hoffman, president of Pacific Coast Division, Link-Belt Co., graduated from Stanford and had two and one-half years' military service.

H. RADFORD RUSSELL, Assistant Paper Mill Superintendent, Everett Pulp & Paper Co., who is General Chairman of the 14th anniversary convention of the Pacific Coast Division of the Superintendents Association, scheduled for Seattle (New Washington Hotel) Dec. 5-6. "Quality will keynote the papers and discussions," he said. "And there will be a program for the ladies."

GEORGE SCHNEIDER, vice president of Celanese Corporation of America, New York, accompanied by other company officials, visited the Port Edward, B. C., site of the company's proposed new sulfite mill during September.

Members of the *PAPER MILL MEN'S CLUB* of Southern California recently spent a delightful day deep-sea fishing off Newport Bay, Calif. The biggest fish was caught by a guest, Ike Armstrong. The unlucky fish was a 52-lb. albacore. The party was managed by co-chairman Dewey Megel of Silklin Paper Co.; Al Hentschel of Johnson, Carvell & Murphy; Neil Sinclair of Sinclair Lange and "Lardy" Brenzel of Los Angeles Paper Co.

13TH ANNUAL PAPER MILL MEN'S CLUB Hi-Jinks was unlucky for nobody who attended the perennial shindig at Lakewood Country Club, Long Beach, Calif., Sept. 19. Crowd was biggest on record, with 341 present. In this photograph are (left to right) John D. Kirby, General Hi-Jinks Chairman; L. A. Gardiner (Nekoosa-Edwards) Vice Chairman; Newbey Green (Crown Z.) Paper Mill Men's Club President; and Gary Cann, who spoke for jobbers and wholesalers, who were paper mill men's guests. Record entry of 110 played golf. Jack Holmes, guest, took first honors with low gross of 76 in first flight; B. G. Donaldson low net with 70; 2nd flight winners were Stan Potter and Jerry Thiem; 3rd flight, Irvin Strong and Bob Edwards; 4th flight, Phil Ossian and Lee Lamboy.

J. J. HERB AND FRANCIS "BILL" HERB, father and son, manager of the Pacific Coast Paper Mills of Washington, were hunting last month in Caribou country of British Columbia.

MITCHELL THOM, formerly of Victoria, B. C., and now superintendent of a mill subsidiary of United Shoe & Leather Co., S. A., at Aluminio and Etzatlan (25), Mexico City, writes that he will take old friends to see a bull fight if they come down his way.

FRED GILMORE, assistant superintendent of the Puget Sound Pulp & Timber Co., took his family along on a motoring jaunt to Yellowstone and points along the Oregon Coast before spending a week of fishing at his summer home on Whidby Island. Fred reports fishing the best ever—over 100 for the family.

J. E. GARRISON, Pacific Northwest representative for American Cyanamid Co., had a big hunting trip to Alberta planned but the new restrictions on bag limits discouraged him so much he is doing his hunting in eastern Washington.

CHARLES H. VICKERY, who a few months ago was promoted to sales manager of E. D. Jones & Sons Co., Pittsfield, Mass., made his sixth trip in recent years to Pacific Coast mills during October and this was his last trip as a "regular caller." Under a new reorganization of his sales force, he will have a new regular traveling representative in that area as well as in other sections of the country and his travels will be confined to special trips.

JOHN L. TAYLOR, formerly manager of the Stockton, Calif., division, Zellerbach Paper Co., died recently. He had been with the company 38 years.

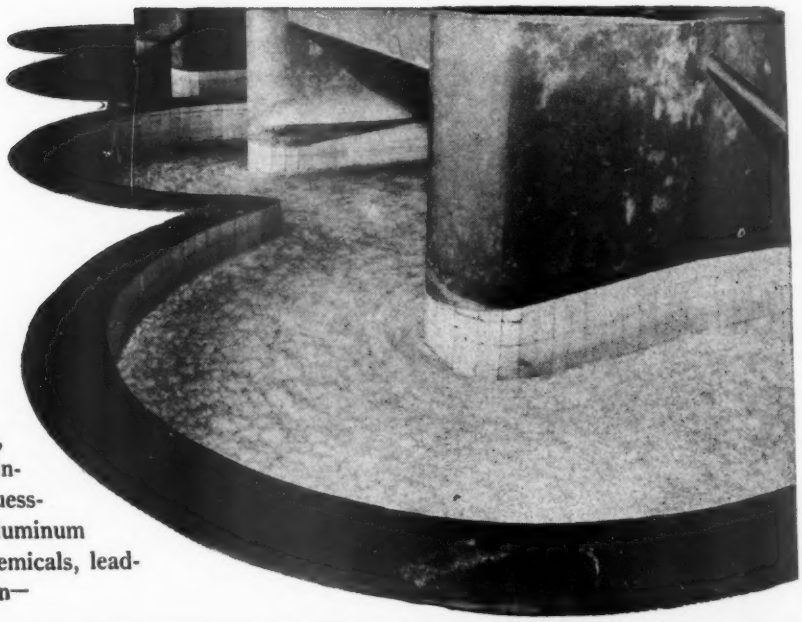
HOWARD DIXON, shift foreman, Puget Sound Pulp & Timber Co., owns the newest boat to join the rapidly growing list of craft owned by Bellingham pulpmakers. His is a 28-foot cruiser built by the owner.

ZELLERBACH PAPER CO., San Francisco has purchased the Rahn McWhorter Paper Company, Salem, Ore., and is now operating it as the Salem branch of the Portland Division.

THREE NEW MEMBERS of the faculty of the college of forestry, University of Washington, are Dr. Harvey D. Erickson (U. of Minnesota graduate), associate professor of forest products; Dr. Philip G. Haddock (U. of Calif.), assistant professor of silviculture, and Bernard L. Orell (Oregon State College), assistant professor of forestry.

TWO HUNDRED days of continuous operations unmarred by a single lost-time accident was the record achieved Sept. 15 by Canadian Boxes, Ltd., Pacific Mills' contained plant subsidiary at Vancouver, B. C. Longest accident-free period previously attained by the plant was 69 days, reached last February. It employs 175.

sizing



Maximum sizing and pH control call for careful selection of the chemicals used in paper making. Their quality must be uniform, their purity consistent, in order to insure perfect sizing. To take the guesswork out of their selection of Aluminum Sulfate and other paper-making chemicals, leading producers throughout the nation—

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- Sodium Metasilicate
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- Salt Cake
- Sodium Sulfide
- Sodium Hyposulfite
- Sodium Sulfite, *Anhydrous*
- Sodium Bisulfite, *Anhydrous*
- Disodium Phosphate
- Trisodium Phosphate
- Tetrasodium Pyrophosphate
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Management Problems

IN A DIVERSIFIED SPECIALTY MILL

Co-ordination of effort and division of responsibility between departments is a pulp and paper industry problem whose importance is almost directly proportional to the degree of diversification of a mill's output, according to Ralph G. Johnstone, manager of manufacturing, the E. B. Eddy Co., Hull, Que.

"The larger an organization the greater is the segregation of functions into specialized groups and the more important becomes the task of co-ordinating their efforts," declared Mr. Johnstone in an address on Sept. 10 before the Murray Bay, Que., convention of the New York-Canadian division, American Pulp and Paper Mill Superintendents Association.

"In a setup wherein service departments such as engineering, maintenance, steam and power, personnel, technical control, etc., function as separate entities from the producing departments, it has been my experience that operating superintendents tend to avoid their full responsibilities by shifting the onus to the service departments. Thus, if employe grievances arise they can be referred to the personnel department for attention. Should a mechanical breakdown occur, it is the concern of the maintenance departments.

"Similarly, developments and improvements may be regarded as the sole responsibility of engineering, and so on. Furthermore, situations arise wherein superintendents without regard to repercussions outside their departments will take unilateral action to the detriment of other divisions or the organization as a whole.

"The point that is frequently overlooked by some superintendents is the fact that they are managers of a business within a business and, therefore, are responsible for all matters pertaining to their departments. Irrespective of the type of organization, service departments are established primarily to assist in economically and efficiently producing the end products and their effectiveness will be in direct ratio to the initiative and intelligence shown by operating superintendents in utilizing their facilities. Their function is not to relieve superintendents of responsibility, and any misunderstanding in this respect inevitably will affect adversely the superintendents' position and have the result of specializing him out of his proper job."

Depends on Individual

Speaking on "The Problems of a Diversified Specialty Mill," Mr. Johnstone pointed out that as the staff setup in industry changes, the status of a superintendent can and will vary widely depending on the individual.

RALPH JOHNSTONE, Manager of Manufacturing, The E. B. Eddy Co., Ltd., Hull, Quebec, whose address on administrative problems of a diversified mill, was presented recently at Murray Bay, Quebec, Superintendents Convention.

"An attitude of laissez-faire and a disposition to just get by through evading all but the most direct responsibilities will inevitably relegate him to a position of minor importance with resulting loss of earning power and prestige.

"On the other hand, the full realization and discharge of his logical functions will have the opposite desirable effect. It should not be forgotten that the equitable and proper distribution of the administrative burden among a mill staff has a direct bearing on manufacturing expense, since the shirking of responsibility on the part of one or more individuals usually results in the diversion of work into less competent hands at increased cost. Top management is becoming increasingly aware of this fact and as a consequence the performance of superintendents and those of equivalent status is receiving more and more scrutiny.

"The physical layout of our mills (Eddy and Booth Mills at Hull and Ottawa) accentuates the problem of co-ordination and militates against the frequent contacts and daily associations between departmental heads possible in a more closely integrated plant. Because of the time necessary to assemble the group, regular meetings of superintendents are limited to weekly sessions where company policy is interpreted and all matters pertaining to manufacturing activities are discussed. It is also routine to review as issued the monthly operating financial statements and costs data so that at all times superintendents are aware of the fiscal progress of the company.

"Generally speaking, we follow the theory that the better informed superintendents are on overall company activities, the more intelligent and efficient jobs they will do in managing their individual departments. Otherwise, the operations are directed by daily contacts as necessitated by circumstances between department heads and the general superintendent. It might be added that it is company policy with us to delegate to department heads authority commensurate with responsibility and the exercise of initiative in discharging individual responsibilities is encouraged.

Sales-Manufacturing Liaison

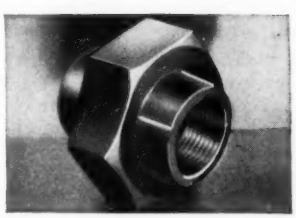
"A further vital consideration in specialty mill management is the problem of maintaining close liaison between sales and manufacturing. The task of working out most economical trims, grouping orders and scheduling runs to the best advantage on the various machines is important enough in our particular case to warrant a separate group within the manufacturing organization.

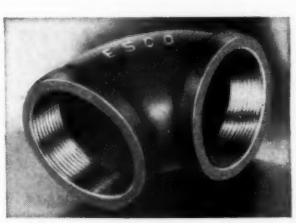
"Known as the order planning department, its function as the name implies is to screen and group all orders and schedule runs for some weeks in advance, having regard to the proper servicing of customers and production considerations in the various departments. The mechanics of the system provide for a daily meeting of the order planning manager with representatives of sales, specialty manufacturing, finishing and traffic departments, at which sessions orders are finally released to the mills.

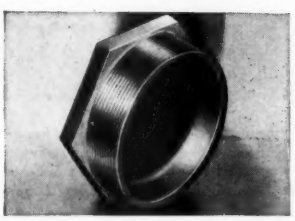
"Inasmuch as serious losses may be incurred through errors in fixing trims and scheduling, a double check is subquently made by the specialty mill and finishing superintendents prior to the orders being routed to the machines. In addition to this routine liaison work, regular monthly meetings are held with the senior sales officials to discuss matters of mutual concern, and since sales headquarters are located at the mill there are, of course, daily contacts with the various departments or manufacturing on current problems."

Mr. Johnstone emphasized the important role of superintendents as morale builders and as the link between top management and the rank and file. He felt that if labor at all times had a proper understanding of management's problems through an intelligent liaison system there would be an end to industrial turmoil. Continuance of the free enterprise system, he believed, depended on this understanding.

"No longer is it sufficient," said Mr. Johnstone, "for a department head to be merely technically competent. In addition, he must have or rapidly acquire a fair degree of managerial ability combined with the qualities of leadership, initiative and aggressiveness, if he is to meet the performance standards presently expected of him. In other words, he must be the spark plug of his group."







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Sutherland Paper Co.

ADDS TWO MORE MACHINES

William Race, who became president of Sutherland Paper Co., in Kalamazoo early this year when L. W. Sutherland, long time president and mayor of Kalamazoo, turned that post over to him, proved to be a handy man with a shovel as shown in the accompanying picture taken at the recent ground-breaking for Sutherland's new $4,000,000 two-machine board mill. The company will have six machines in all when the project is done.

Participating in the ground-breaking with him (see picture) were Treasurer L. W. Sutherland, Jr., tall son of the chairman of the board; Superintendent Glen Sutton and Maintenance Director Harold Buttery. Incidentally, Mr. Sutherland, who joined the company in 1938, took over four years of leave with the U. S. Navy in the late unpleasantness, attaining rank of chief quartermaster.

This important board company's new mill building will be equal to two stories in height and will have 190,000 square feet of floor space. This compares with 127,000 square feet of floor space at the new building now completed just north of the office, and 95,000 square feet of floor space for the new unit at the Sutherland division.

The new board mill will be large enough to house two board machines. Present plans call for early installation of one new board machine, and ultimate relocation and modernization of present board machinery.

Included in the new unit will be a warehouse and storage building.

New machinery and equipment have been ordered for the new unit. In addition to the board machines, the installation will include stock preparation equipment and a new turbine to increase the present power plant capacity.

Meanwhile, work is nearing completion on the two new units started last year. The new converting plant north of the office was to be in operation in September, going into full production as machines can be added. The Sutherland division addition will house presses and equipment.

All of the new buildings utilize concrete brick, and glass construction and are entirely fireproof. An expenditure of $4,000,000 is represented.

The present expansion program is the outgrowth of an increased demand for products.

Present machines in Sutherland's operation are all cylinder machines. One in the Sutherland Division, with Arnold Weller as superintendent, makes folding boxboard with capacity of 125 tons per day. The others in the Standard Division, with Mr. Sutton as superintendent, make chip, pail and dish stock, coated news, manila lined news and other similar products to potential tune of 225 tons a day. The old Standard Paper Co. was purchased by Sutherland some years ago.

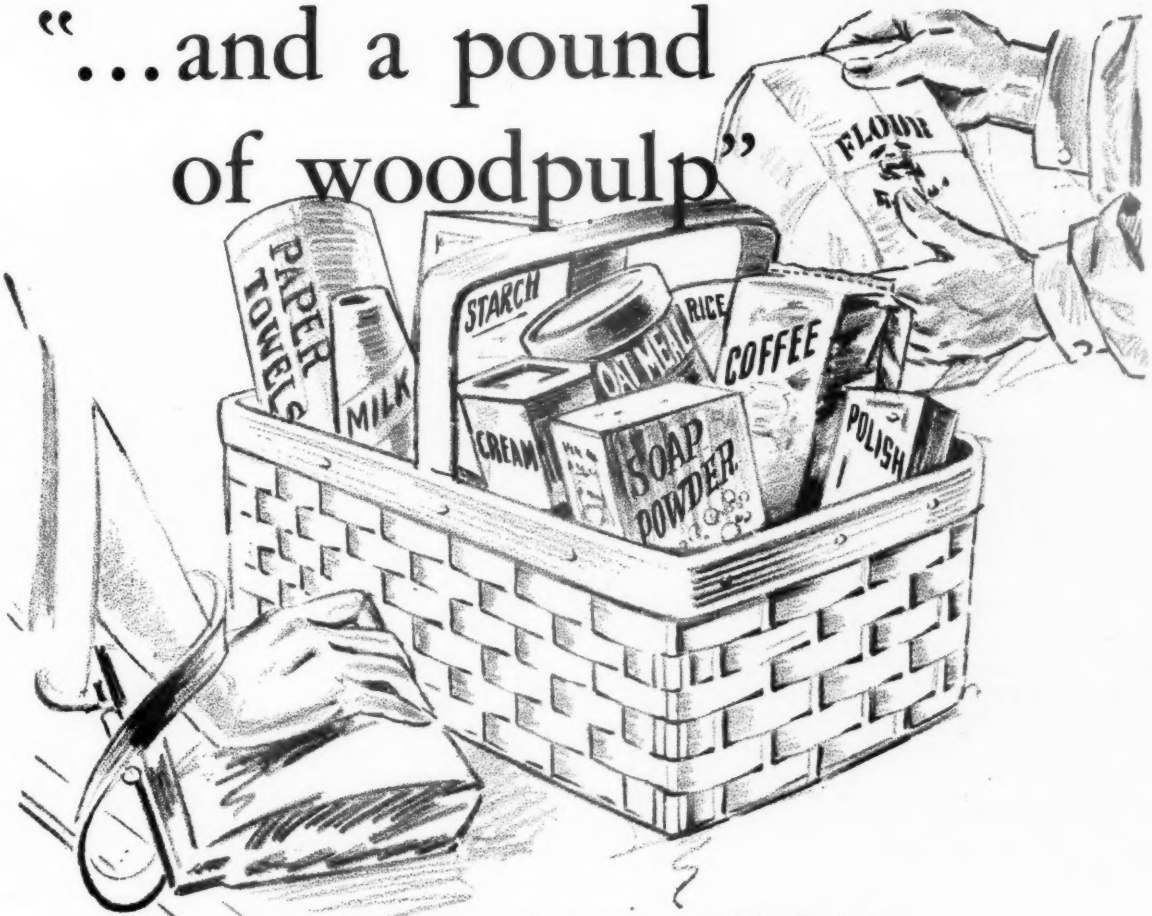
BREAKING GROUND for new board mill of Sutherland Paper Co., Kalamazoo, Mich. Left to right: Glen Sutton, Superintendent of Standard Mill Division; William Race, former Treasurer, who became President early this year; Treasurer Lou Sutherland, Jr., and Harold Buttery, Maintenance Director.

Glen Graham is vice president in charge of operations.

A. L. Sherwood is technical director at Sutherland and Earl Dunton is chief engineer.

PACKAGING RESEARCH on uses, production, sales promotion opportunities, and general benefits afforded users of laminated packages will be conducted by the newly formed Laminated Bakery Package Research Council. The Council plans soon to establish a fund at two or more leading universities where a thorough study of laminated packages will be made. Members of the Council, sponsored by the Laminated Paperboard Package Association, above, left to right: Harvey H. Robbins, executive secretary of the Council and the Association, Chicago; John Snyder, sales promotion manager of bakery packaging, Marathon Corporation, Menasha, Wis.; Gordon Dilno, manager of the bakery package division off Sutherland Paper Company, Kalamazoo, Mich.; John Stevens, manager of the bakery package division, Container Corporation of America, Chicago.

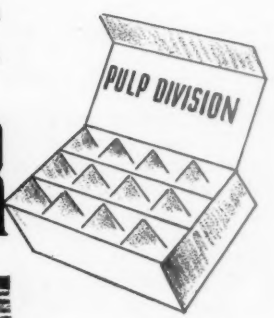
"...and a pound of woodpulp"



Not as absurd a remark as you may think, for it is Mrs. Housewife who ultimately buys and uses most of America's paper and paperboard.

Consider the multiplicity of items which are sold in today's markets—items which are either made of paper or packaged in a product made of woodpulp, molded or fabricated in one of a thousand ways to serve your interests . . . satisfy your needs.

As part of an industry which provides other industries with truly essential services, it is the job of the Pulp Division, Weyerhaeuser Timber Company, to furnish an assured and continuing supply of chemical woodpulp.



WEYERHAEUSER

Personals

CANADA

JOHN STANDEL and GEORGE MOWBRAY, of Powell River Co., were out fishing in Powell Lake, B.C., when they spotted a large cougar swimming across the lake. The only weapon available was a carpenter's hamer, but the Powell River men promptly attacked. One blow took most of the fight out of the cougar, which was hauled aboard and trussed. On the return journey, the cougar suddenly came to life with a snarl and violent clawing. With some difficulty the struggling animal was finally heaved overboard and killed.

BERT PLANT is manager and R. R. Holmes resident engineer of the Smooth Rock Falls mill of Abitibi Power & Paper Co., whose bleach plant is now in full operation at the rate of about 230 tons daily. Sherbrooke washers and double shaft mixers were recently installed there. O. Wagner is sulfite superintendent.

CHARLES WADD has been appointed sulfite superintendent at the Kapuskasing, Ont., mill of Kimberly Clark Corp.

CLAUDE STEEVES, formerly of St. Regis, has been appointed superintendent of the Marathon sulfate mill of Marathon Paper Mills of Canada on the north shore of Lake Superior. R. T. Steedman, manager, is now making his headquarters at Marathon.

H. WYATT JOHNSON, of the Montreal office, Sutherland Refiner Co., plans to visit west coast pulp and paper mills during the fall.

Canadian Technical Group in Vancouver

John Ashby, mill manager of Westminster Paper Co., presided at the sessions of the technical section, western branch, Canadian Pulp and Paper Association, in the Hotel Vancouver, B. C., Oct. 17.

Guest speaker at the banquet was Dr. Norman MacKenzie, president of the University of British Columbia.

Papers were on power plant modernization at the Woodfibre mill of B. C. Pulp & Paper Co., recovery of knots and screenings at Pacific Mills, by Henry Ostrowski, and magnesia base sulfite pulping and recovery, by R. S. Hatch, Weyerhaeuser Timber Co., Longview, Wash.

IF DEMAND for and production of paper continues at the present rate through the winter and spring, there will probably be a balance between supply and demand for market pulp by the early summer of 1948, says Hugo H. Hanson, president of the Association or Pulp Consumers and head of W. C. Hamilton & Sons, Miquon, Pa. Mr. Hanson and W. B. Zimmerman, executive vice president of the Howard Paper Mills, Inc., of Ohio, were visitors on the Pacific Coast during October.

W. A. E. PEPLER, formerly secretary of the Quebec Forest Industries Association and secretary-manager of the Canadian pulp and paper industry's pulpwood committee, has been appointed manager of the woodlands section, Canadian Pulp and Paper Association, succeeding Alex Koroleff, who becomes director of woodlands research of the Pulp and Paper Research Institute of Canada.

PROF. H. O. KEAY, manager of laboratories for Consolidated Paper Corp., was recently presented with a life membership in the technical section, Canadian Pulp and Paper Association.

SIR ERIC BOWATER, president of Bowater's Newfoundland Pulp and Paper Mills, announces that a groundwood machine with a productive capacity of 100 tons daily will be installed at the company's Corner Brook mill on Newfoundland. The new machine will handle approximately 30,000 cords of pulpwood annually.

School Teachers Learn About This Industry

The second annual informal get-together for mill executives, administrators and faculty members of local schools was held by Crown Zellerbach Corp. at Camas, Wash., Oct. 7, attended by 90 teachers and their husbands or wives.

F. A. Drumb, resident manager, paid tribute to the teachers for their influence on the community. G. W. Charters, assistant resident manager, gave a summary of the multi-million dollar expansion of the local mill. Phases of the operation were discussed by S. A. Grondona, assistant resident manager; O. T. Defieux, plant engineer; G. M. Julien, assistant to the resident manager; Gus Ostenson, manager of paper production; F. F. Sullivan, assistant to the resident manager; W. C. Jacoby, technical supervisor; J. H. Shively, bag factory superintendent; Mrs. Vera Berney, women's personnel supervisor; and V. C. Gault, personnel supervisor.

A. G. Natwick, assistant resident manager and dean of Crown Willamette Paper School, offered to teachers the use of visual education equipment and welcomed teacher attendance at the paper school.

The teachers were invited to tour the Crown plant.

Lavish Use of Paper

In spite of newsprint cuts and pleas for paper salvage the British Government continues to use paper with extreme liberality in its many and varied campaigns, according to World's Paper Trade Review of London.

Women for industry is the latest drive upon which paper has been lavishly expended. Although newspaper advertising has already familiarized most people with the appeal, the government has printed 175,000 posters and 300,000 leaflets.

Wood Bark (Pulp) Is Used For Wrapping Paper

Wood bark, heretofore discarded as waste in manufacture of newsprint, has been made into wrapping paper at the Chicago Tribune mills in Thorold, Ont. Two rolls of paper in bark wrapping have been sent to the Tribune and two to the New York News.

Fred J. Byington, Jr., assistant business manager for The Tribune, said that the manufacture of wrapping paper is still in the experimental stage and that improvements in its manufacture are expected.

The paper is of brownish-chocolate color and its durability is said to compare favorably with that of heavy wrapping paper made of pulpwood.

"If this experiment proves successful as to quality and costs, the Tribune plants in Canada will save 1,360 tons of sulfite and 2,040 tons of groundwood each year. It is estimated annual saving throughout the industry could be 16,000 tons of sulfite and 24,000 tons of groundwood.

"Unsung Hero" of Industry Found in New York

Among unsung heroes of the pulp and paper industry are the men—mostly in their eighties now—who laid the brick for the stacks of the old mills in New England. A **PULP & PAPER** editor ran into one recently in Malone, New York, by name of Jim Barber but also known here and there as the "Montana Blizzard." That monicker came to him when he won a brick-laying contest in St. Louis in the Nineties and it was erroneously assumed he came from Montana because that was the location of his most recent job. A high-climbing bricklayer was on call from the 48 States in those days, but although Jim worked out of Jersey, his native soil has always been near the shores of Lake Champlain. He helped to build the stack of the old Burgess mill at Berlin, N. H., the stack at Rumford, Maine, and dozens of others. He doesn't do it any more. Not too old, he says, at 85. Too darned lazy.

Byron Weston Adds New Finishing Building

Twenty-five thousand square feet of additional space for the finishing department will soon be ready at the Byron Weston Company, makers of papers for business records, Dalton, Mass., according to Hale Holden, Jr., president. The new building will allow for the rearrangement of other departments, with consequent speed-up in production, he states. The new finishing building will have complete air conditioning with perfect humidity and temperature control.

Mill Shows Weekly Movies

Moving pictures are now being shown to the laboratory and supervisory staffs of the Puget Sound Pulp and Timber Co. every Wednesday afternoon in the pulp mill library. Films of a technical and informative nature are being presented over the new Bell-Howell talking equipment. Ivan Campbell, instrument engineer, is the projectionist.

Rubber Rolls

"No. 1" is the universal symbol for Top Grade Crude Rubber. But there is a superlative grade that is even better than No. 1. It is the world's finest Crude Rubber —from selected plantations of outstanding stock—for which Stowe-Woodward, Inc. pay a premium to use in your rolls. *Its symbol is "IX".* IX Premium Rubber is processed with Stowe-Woodward's IX Premium Craftsmanship to give you the finest rubber rolls that money can buy.

STOWE-WOODWARD, INC.

Craftsmen in rubber

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Stowe-Woodward Rolls are made on the West Coast by Huntington Rubber Mills, Inc., Seattle, Washington

SEES 32% OFFSET BOOK INCREASE

Price Plateau Reached

Paper distributors will soon be "calling on printers, hat in hand," with offers to sell offset book in all grades, including coated, James A. Gruner, assistant to the manager, Blake, Moffit & Towne, told lithographers at the recent 22nd Annual Conference, Pacific Society, Printing House Craftsmen, held in San Francisco.

He predicted a 32% jump in offset book output, part of an overall three-million-ton increase in general U. S. paper production between Jan. 1, 1946, and Jan. 1, 1948.

Mr. Gruner's talk follows in part:

"I am confining my discussion to what I believe are the questions that are uppermost in your minds concerning offset papers. I would list these questions as follows: (1) Why is offset paper in short supply? (2) New, postwar grades of papaer. (3) Prices.

"Now why is paper in short supply? In order to understand the present situation let it first be stated that there is no true shortage, but instead a vastly increased demand which cannot be satisfied by present production.

1946 Production

"In 1946, paper produced in the United States, of all grades, totaled *19 million tons.* This is a figure quite a bit in excess of all previous paper-producing records in our country. But let's also take a look at the figures for per capita U. S. consumption of paper over a period of time. By per capita consumption I include usage of all kinds of papers—newspapers, magazines, printed matter, containers, etc.:

"Within a period of just 46 years (1900-1946) the paper demands of each and every person in the United States, men, women and children, have jumped 245 pounds to 320 pounds, average per capita consumption has increased more than 300%.

"Now, let's see what the mills are doing to meet this increased demand. New production planned to enter the market during the period Jan. 1, 1946, to Jan. 1, 1948, amounts to about 3 million tons. It breaks down about like this:

Paper Increases

Grade of Paper	*Increase Planned*
Book	32%
Groundwood	37%
Fine paper	11%
Paperboard	12%

"Other increases not particularly affecting offset printers are:

Wrapping	13%
Tissue	29%
Building	15%

"The one grade which shows a production loss for this two-year 1946-48 period is newsprint, with a 17% loss. This loss is attributable, at least partially, to conversion of newsprint manufacturing equipment to the making of better grades and to the sale of newsprint mills to new owners who use the equipment to make other groundwood grades.

"Mill sales to publishers and converters have been a source of great trouble for the industry, since it put the new owners in a position to buy the production, whereas former old customers of these same mills had to go shopping elsewhere for paper at a time when little was available except to old, regular customers.

"Pulp has been another source of trouble. At present the self-contained mills are able to produce enough pulp to maintain capacity production; but non-integrated mills have an acute shortage that is being eliminated very slowly. These mills depend on foreign supplies, principally Canada, for over 50% of their overall pulp requirements. The high price of Scandinavian pulp is a principal concern to these mills today. At present Canada furnishes us with 66% of our foreign-supplied pulp, Sweden 30%, and Finland 4%.

Text Papers

"Today, some of the higher-priced text papers are fairly easy to obtain. Offset book is getting easier, but coated book is just as scarce as ever.

"Before long, however, the 32% increase in book paper production mentioned above (much of it in the machine-coated class) will enter the market and, when it does, all distributors will probably come around to your door—with hat in hand—offering book paper of all kinds, including coated.

"Now, let's discuss new, post-war grades of offset.

"First of all, now that mills can purchase or produce their own pulp supply, they can control quality better. During the war, the WPB directed all pulp usage and required the use of much waste paper as an "extender." Of course, while pulp is short, many mills will be handicapped, but, generally speaking,. the first post-war improvements will be in color and strength of old, standard grades.

"New grades will not be available until present supply catches up with demand and competition again asserts itself.

New Equipment

"Of course, new equipment now building, or planned, will make better paper, but my opinion is that most equipment will be used to make better paper within present standard grades.

"Now finally, a word about prices:

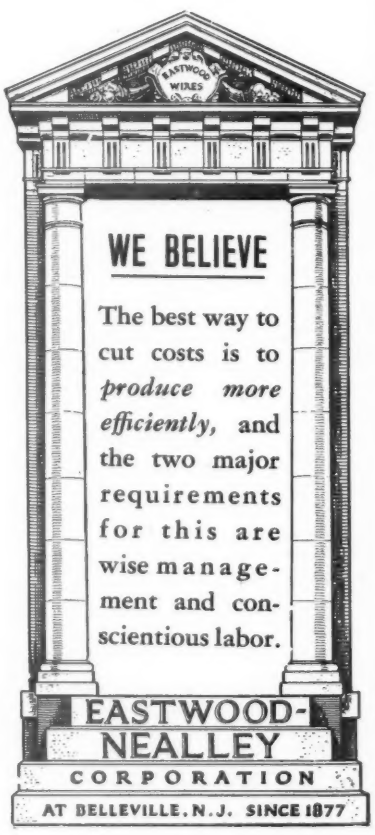
"I believe that a price-plateau has been reached, beyond which most manufacturers do not wish to go. Of course, the present general inflationary spiral has yet to halt, and future advances in wage and material cost may have to be reflected in new higher selling prices.

"To attempt to forecast the future of prices in any line is unsafe, but I can only repeat that neither manufacturer nor distributor want to see present prices advanced, if such action can possibly be avoided."

25 Jones Jordans in Canton Mill

There are now a total of 25 E. D. Jones & Sons Co. jordans in use in the modernized and expanded Champion Paper & Fibre Co. mill at Canton, N. C., which was visited last month by the TAPPI-Superintendents joint convention delegates meeting in nearby Asheville.

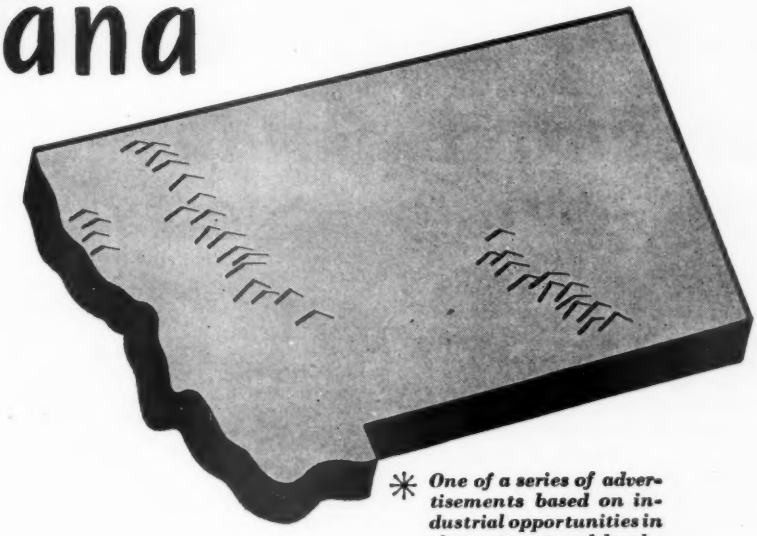
An additional 11 Jones Majestics were ordered for the new program, bringing the total to 25 and the over-all total of 34 jordans in this mill places it among mills making the largest use of these refining machines.


WE BELIEVE
The best way to cut costs is to *produce more efficiently,* and the two major requirements for this are wise management and conscientious labor.
EASTWOOD-NEALLEY
CORPORATION
AT BELLEVILLE, N.J. SINCE 1877

UNION PACIFIC

TREASURE MAP OF INDUSTRY

Montana *



WEALTH OF MINERAL DEPOSITS
IMMENSE COAL RESERVES
LARGE LUMBER PRODUCTION
AVAILABLE WATER POWER
ABUNDANT LIVESTOCK
VALUABLE WOOL CLIP
VARIED AGRICULTURE
TREMENDOUS WHEAT YIELD
SCENIC BEAUTY

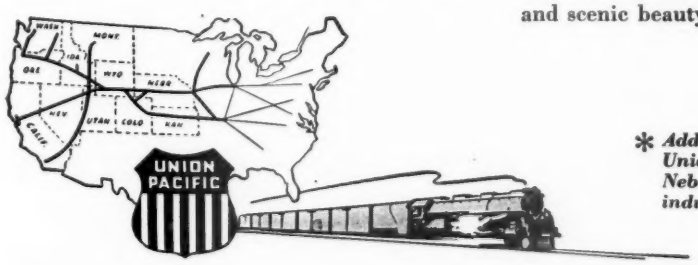
* *One of a series of advertisements based on industrial opportunities in the states served by the Union Pacific Railroad.*

Known as the "Treasure State," Montana is richly endowed with raw materials essential to industrial production. Among the many metallic minerals are silver, copper, lead, manganese, chromium and molybdenum. Coal reserves have been estimated at over 400 billion tons. The majority of the state's cities are supplied with natural gas.

Montana is a top producer of cattle and sheep, the annual sheep production being approximately two million head with a wool clip of great value. In agriculture, wheat takes first rank among grains. Sugar beets, potatoes, together with other vegetables, are grown on its farms. There are many thousand acres of forests, principally pine.

The Union Pacific Railroad serves Butte in the heart of the great mining area, and West Yellowstone—most popular rail entrance to the famous Yellowstone National Park.

Montana welcomes new industry. It has the space, materials, facilities and manpower to encourage firms seeking new locations. Additional advantages are good living conditions, an excellent educational system and scenic beauty.



* *Address Industrial Department, Union Pacific Railroad, Omaha 2, Nebr., for information regarding industrial sites.*

UNION PACIFIC RAILROAD

THE STRATEGIC MIDDLE ROUTE

"The most effective way to encourage the growing of trees is to develop profitable reasons for cutting them down."—(A. G. T. Moore, Southern Pine Assn. executive, in 1938).

COOPERATIVE MANAGEMENT

Proposed for Ontario Forests

As a means of perpetuating the pulp and paper and other forest industries of Ontario, Maj.-Gen. Howard Kennedy, of the Ontario Royal Commission, has recommended that the province be divided into 12 distinct forest areas, with 12 operating companies to be established for their management along systematic lines.

"I contend that an assurance of standing timber in perpetuity is of more value to a limit holder, for purposes of financing, than his present insecure tenure under legislation which is now in the statutes of the province," declares General Kennedy in his report to the Ontario government.

"All crown forest resources having been pooled, their sensible redistribution becomes simple and the major defects of the present system can be eliminated."

("Crown lands" means timberlands actually owned by the government.)

General Kennedy, until recently vice president for woods operations, Quebec North Shore Pulp & Paper Co., was appointed by Premier George Drew of Ontario to make an exhaustive inquiry into all phases of the province's forest problem. He spent several months in this undertaking and went to the Pacific Coast last year to gather data on how British Columbia and the western states were dealing with their situation.

General Kennedy's proposal for the division of the province into forest areas with an operating company for each is probably the most interesting feature of his report. If this proposal is adopted, all licenses, agreements, permissions and permits would be suspended for a period of not less than ten years. In return, the government would assure the present timber limit holders a supply of wood in perpetuity up to the present capacity of all domestic mills by pooling the resources of all provincial crown lands and by establishment of a policy which would allow further expansion only when it had been established beyond question that wood was available without possibility of interference with domestic enterprises.

Future extensions, commensurate with the productive capacity of the tributary forests, would be provided for, if justified,

MAJOR GENERAL HOWARD KENNEDY, who was until recently Vice President of Quebec North Shore Co., subsidiary unit of Quebec North Shore Co., subisidary unit of Chicago Tribune publishing firm. He proposes co-operative plan for Ontario Forests.

as soon as the true capacity could be ascertained. Exporters would receive quantities of wood commensurate with the productive capacity of their present limits, but not necessarily from the areas their agreements now cover.

General Kenndy recommended that no export be permitted from an area which would prejudice the continued economic life of legitimate expansion of any domestic enterprise.

"There is, however, enough material for all, including sawmills and exporters, if it is properly harvested and distributed," concluded General Kennedy.

He proposed the following directorates for the forest operating companies:

(a) Where pulpwood-using industries have consumed the bulk of the wood produced in the preceding five years:

	No. of Directors
Pulp-paper mills	2
Sawmill group	1
Pole and tie operators	1
Exporters' group	1
Small operators	1
Ontario government	1

(b) Where sawmill operators have consumed the greater part:

Sawmill group	2
Pulp-paper mills	1
Pole and tie operators	1
Exporters' group	1
Small operators	1
Ontario government	1

With such representation for the various interests, no particular group would be able to dominate the situation, he said. Directors could select operating officials from the best of their personnel.

Mill executives would only need to calculate their wood requirements and send a requisition to the forest operating company, in which they hold an appropriate share, he said. Tentative requisitions for raw material could be made as of Jan. 1 in each year, to permit the company to plan its season's work, with final requisitions and adjustments at Aug. 1. "I would suggest provision of working capital for the company by means of monthly advances by the operators at agreed rates, say $1.00 per cord per month, commencing with the placing of the tentative requisition," he said.

"Priority in regard to timber in any area should go to domestic mills," said General Kennedy. "Operating companies should deliver wood to their own domestic mills at cost (which would include the fixed dividend on stock). Wood produced for other companies should be permitted to carry a nominal profit over the cost to domestic mills of possibly 50 cents per hundred cu. ft., and wood produced for export should carry a higher rate of profit, possibly $1.50 per 100 cu. ft."

NEW FIRE CONTROL EQUIPMENT

Development of the use of a middle-buster plow with a Dodge Power Wagon supplying the drawing power is a recent contribution to forest fire control in the South by the Florida Forest Service. The truck also carries water for a fire fighting spray. The object is quick application of control methods before a blaze gets out of hand.

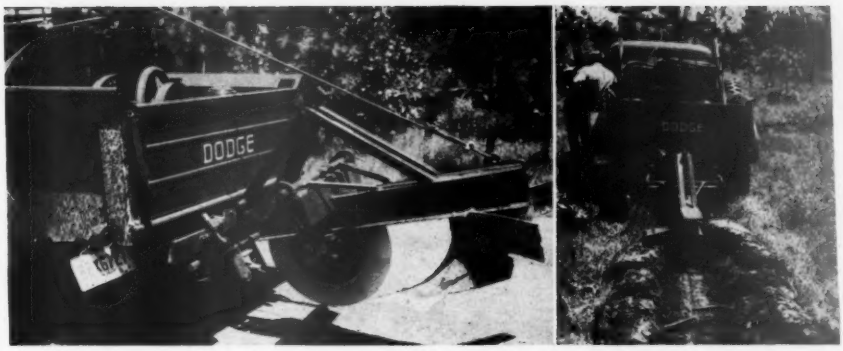
Results obtained from the truck mounted plow, according to Owen R. Douglass, fire control chief for Florida Forest Service, have been most gratifying. The plow operates very efficiently back of the power wagon and provides a fire line from three to four feet wide. The power wagon handles the plow while plowing with little or no strain upon the engine, and no concern is felt over the ability of the Dodge to pull the plow.

The principal question to be proven rises from the fact that the plow weighs

approximately 450 pounds and is suspended at the rear of the frame, back of the wheels. Any weakness that might develop would rise from this feature. In Florida the Dodge power wagon has carried the plow, and also from 250 to 300 gallons of water.

The plow itself is manufactured by the Duval Auto & Tractor Company, of Lake City, Fla., headed by C. J. Couvreau.

The first model used was equipped with hydraulic lift but the additional cost of $200 was deemed unnecessary and a hand winch is now used to lower the plow to working position, or to raise it for transit.



LEFT: Close-up of fire lane middle buster plow and rolling coulter suspended from rear frame of Dodge Power Wagon. Right: This shows the kind of fire-stopping furrow made by the Dodge Power Wagon-drawn middle buster in a demonstration made by the Florida Forest Service for PULP & PAPER.

HOW A RAILROAD HELPS THIS INDUSTRY

And, In So Doing, It Strengthens Its Own Future

By W. J. KREBS
Southern Editor

Down from the Potomac River along the seacoast into Florida and reaching back through Georgia there lies a natural forest area whose potentialities have been recognized by industries based upon wood utilization. This area is served by Seaboard Air Line Railroad, and its appreciation of its territory, not only has resulted in Seaboard serving mills producing one-third the South's and 13% of the nation's wood pulp, but also has put it "out in front" in public service in connection with forestation.

Expansion in this territory in the late 30's made it one of the greatest producing areas in the world.

First on the list was Union Bag & Paper Corp., locating at Savannah, Ga. Then, in 1936, came Camp Mfg. Co., at Franklin, Va.; Container Corp. of America at Fernandina, Fla.; West Virginia Pulp & Paper Co. at Charleston, S. C., and the world's largest board mill at Georgetown, S. C., by International Paper Co. This was topped off in 1937 by the mills of National Container Corp., at Jacksonville, Fla.; Rayonier Inc., at Fernandina, Fla., and acquisition and expansion of the Halifax Paper Co. at Roanoke Rapids, N. C., by Albermarle Paper Mfg. Co. Later, in 1940, the St. Marys Kraft Corp.'s mill was established at St. Marys, Ga.

Seaboard, whose more than 4,000 miles of lines traversed six states containing 100 million acres of forest land, studied what could be done to assist these "on-line" plants to function successfully. It became the first railroad to employ a forester to serve the users of its line.

At that time many Class 1 railroads had foresters in their employ but these men had duties pertaining to acquisition or production of forest products for the carriers' own use. The new "industrial forester" of Seaboard was to devote his energies to serve industries that had invested millions in new plants on the line.

The Seaboard's action, naturally, was based upon the increased importance of forest products in the over-all tonnage of the entire system. Also, the carrier itself is an important consumer of forest products.

In the early stages of its industrial forester operations, Seaboard conducted demonstrations of good cutting practices; and cooperated with new mills in setting up forestry and fire control programs. Seaboard then reached out to other owners who had trees on their lands with a Forestry Bulletin and other educational publications. The Forestry Bulletin now reaches 13,000 farmers, land owners, foresters, and others. It features new developments and practices, extending recognition to individuals and ideas.

While Seaboard initiated its program ten years ago, its planning was so sound that in 1947, the cutting demonstrations stressed in 1937 were still being set up on a cooperative basis with state and extension services.

In 1945, Seaboard evolved a new double-barreled program.

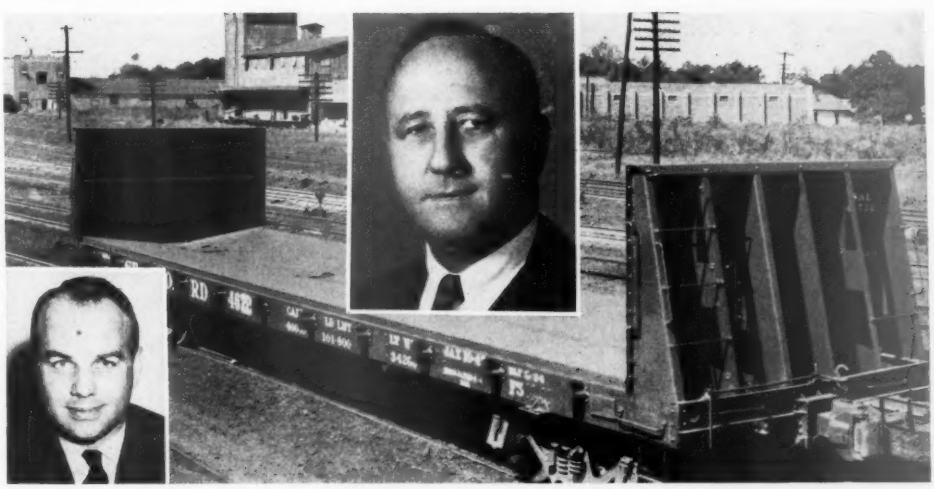
On one hand, it continues its work with the farmer and land owner in cutting practice demonstrations, and exhibitions of what can be accomplished with mechanical aids. Also, Seaboard helped establish adequate state-wide fire control systems, and continued its work with state agencies, state forestry associations, the U. S. Forest Service, and related forestry schools and colleges.

Secondly, the other part of its program looked to the future by important support given to the farm boy organization—the Future Farmers of America.

Since the average Southern farm contains a substantial percentage of forest land—for example in Virginia over 50% of forest is in farm woodlands—it follows that the vocational agricultural student will inescapably deal with forestry since it is (or should be) an essential economic factor on every Southern farm.

Seaboard first went to the state super-

Upper center is DALLAS T. DAILY, General Industry Agent, Seaboard Air Line Railroad, under whose direction the company's industrial and forestry programs are shaped. At lower left is ROBERT N. HOSKINS, Industrial Forester for the railroad. In background is Seaboard's new steel end-rack pulpwood car that permits ease of loading and unloading, as described in this article.



visors of vocational agriculture and, receiving encouragement, turned to wood using industries with an idea for a co-operative forestry program. Acceptance again being forthcoming, it launched its program with the Future Farmers of America—credited with being the largest strictly farm boy organization known.

These are older farm boys enrolled in vocational agriculture and receiving instruction in the class room that is followed through in a supervised program on the boys' own farms. The program produces outstanding farmers.

Each stated is divided into districts, and in competition those outstanding in districts are judged for the effectiveness of their farm woodlands management jobs.

In 1945 and 1946 state winners were guests of the Florida Forest Service at O'Lena Recreational Area. In 1947, 24 winners were guests for a week at Virginia's Forestry Training School at Holiday Lake. Twenty out-of-state boys received all-expense trips with four Virginia boys receiving $50 war bonds.

Through arrangement with the Southern Pulpwood Conservation Association, the winners had all camp expenses paid by Seaboard and other expenses by 17 cooperating woods industries.

In recognition of Seaboard's contribution, the National Future Farmers of America recently awarded an honorary American farmer's degree to Robert N. Hoskins, the railroad's industrial forester.

Effectiveness of this work has been demonstrated by a 200% gain in boys' individual projects in Florida and increases in other states of 65% and above.

Seaboard's interest in the industry has been well founded for in 1946 no less than 3,729,000 tons of pulpwood were delivered to mills on its line.

Conversion of cars to pulpwood use has been continued each year so that the current production of some 300 cars will bring Seaboard's fleet of wood rack cars to about 1,400. Seaboard has effected improvements in the car itself. It found that siderails and iron braces supporting the car ends interfered with mechanical loading and unloading, i.e., the simple act of pushing the pulpwood lengths from the car onto the mill's wood conveyor. The result has been a newly-designed end-rack and sloping steel floor car without these interfering features. The new rack cars can accommodate considerably more wood than those formerly used.

Seaboard maintains a staff of railroad freight rate experts to work constantly with mill traffic men to keep rates on a competitive basis with those of other paper producing areas. To assist mills in finding the most economical sites, it can furnish data on rivers its lines cross; and on adequacy of wood supply and ownership within radii of 50, 75 or 100 miles of potential mill sites. It also furnishes data on taxes and labor supplies.

JEEPS REPLACE QUEBEC HORSES

Back in the Quebec woods, where they've been using horses in logging operations for generations, they're logging by jeep now. And this is only one phase of the trend towards mechanization in eastern Canadian forest activity.

Last winter Quebec North Shore Paper Co., one of the biggest in the business, experimented with the use of jeeps. The experiment paid off so satisfactorily that every one of the company's major camps will have jeeps in service during the present winter. By using jeeps the company hopes to speed up production with less expenditure for manpower.

"It really started when one of our woods bosses sent in an order for two dozen horses just at a time when we just couldn't get them," Gordon Godwin, woods operations executive for Quebec North Shore, told **PULP & PAPER** at his Sherbrooke Street office in Montreal. "We suggested the introduction of trucks and the woods boss was skeptical, but we went ahead anyway and put two jeeps in operation. The results were certainly all we could have hoped for.

"Hauling over a snow road, we averaged 40 cords of pulpwood daily on a nine-hour day basis. The jeep, with chains on all four tires, hauled a sleigh carrying four cords per load. The road, although snow-covered, was hard in surface, with about 600 feet of 2 to 6 per cent adverse grade. Total length of the road was two and a quarter miles."

Mr. Godwin estimates that a jeep, operating in the Quebec woods, with one driver and a helper, will do the work of five teams of horses and five helpers.

The company has decided to handle about 20,000 cords of pulpwood by jeep this season over the main road haul, with six jeeps hauling, one at every main camp, including Baie Comeau, Franquelin, Shelter Bay and Heron Bay.

At Heron Bay, incidentally, the company plans to resume operation, on a bigger scale, of a technique originated several years ago by Spruce Falls Power & Paper Co. when it used a Caterpillar D12 and Hyster in hauling pulpwood bundles in eight-foot lengths.

Quebec North Shore will cut its wood to four-foot lengths and will use Caterpillar D 2's, hauling self-loading "sloops" or sleighs. The company is now building these sloops at its own shops and while the operation will be a small one as logging jobs go, the experimental value may be important and it is hoped that results may justify extension subsequently.

The sloop is described by Mr. Godwin as "a glorified go-devil." They will be equipped with a self-loading arm that will reach over the bundled pile of pulpwood, containing one cord, and with power from the tractor lift it onto the sloop for haulage to the main road, where jeeps will take over and complete the hauling, each jeep taking three cords at a time. Average length of haul is two miles for the jeeps, and for the D 2's in the woods to the main road about 1000 feet.

The company expects to haul about 2000 cords of pulpwood in this way during the 1947-48 winter.

Mr. Godwin, who went east from the west coast and is familiar with logging practice in the Pacific Northwest, has been one of the most outspoken advocates of increased mechanization in the eastern woods for some time, during his association with the woods mechanization committee of the Canadian Pulp and Paper Association he has spearheaded many tests in that field.

He reports that real progress is being made, with operators showing increasing interest in and readiness to adopt machinery in the woods to do jobs that were previously assigned exclusively to men and horses. This is a field that offers wide scope for expansion and it is receiving more and more attention from equipment manufacturers in the west as well as the east.

Murray & Tregurtha "Harbormaster" at Bathurst

Bathurst Power & Paper Co. of Bathurst, N. B., reports that it is well satisfied with the performance of the Murray & Tregurtha Harbormaster installed on one of their pulpwood towboats — a 20 h.p. Model 0-8 unit.

This engine was especially developed to meet the requirements of the pulp industry. It is air-cooled and weighs approximately 1,000 pounds and particularly suitable for lake and river operations. Equipped with the exclusive Harbormaster automatic shear-pin, operators can work in log booms, rapids and reef-filled shores without fear of damaging the underwater assembly. The whole unit can be quickly transferred from one craft to another simply by removing the four bed bolts.

The Bathurst rafts towed by the Harbormaster-equipped tug averaged a little more than 300 cords, the size being limited by the width of the towing channel and also the strength of the current in the river which was considerable when the tide was falling.

The performance of the Harbormaster was compared with that of the old steamboat Nepisiquit for the 1½ miles from holding ground to jackladder under similar conditions, as follows: 1. Saving in time (towing 89,411 cords) a. Operating hours reduced from 718½ to 589 or 18 per cent; b. Normal hours including idle and delay time reduced by 23 per cent. Saving in cost of operation, wages 67 per cent lower, fuel cost 84 per cent lower, board cost virtually eliminated.

TIMBER RECENTLY ACQUIRED on Vancouver Island from Elk River Timber Co. by Soundview Pulp Co. at Everett, Wash., Crown Zellerbach Corp. of San Francisco and the Jamieson Mills will be developed on a perpetual yield basis, according to Leo S. Burdon, general manager of Soundview. The timber involved in the deal previously reported in **PULP & PAPER**, includes a 50-mile section of the Elk River basin from Campbell River to Muchalet Arm.

These "Slasher Saws" cut the pulp wood into 32" lengths for chipping . . . At Powell River, this pulp wood is choice British Columbia Hemlock. Because its fiber characteristics make strong pulp, Powell River Unbleached Sulphite Pulp makes strong paper . . . Remember! For strength, for color, for service and dependability of supply, always buy Powell River Sulphite Pulp.

POWELL RIVER

Unbleached Sulphite Pulp

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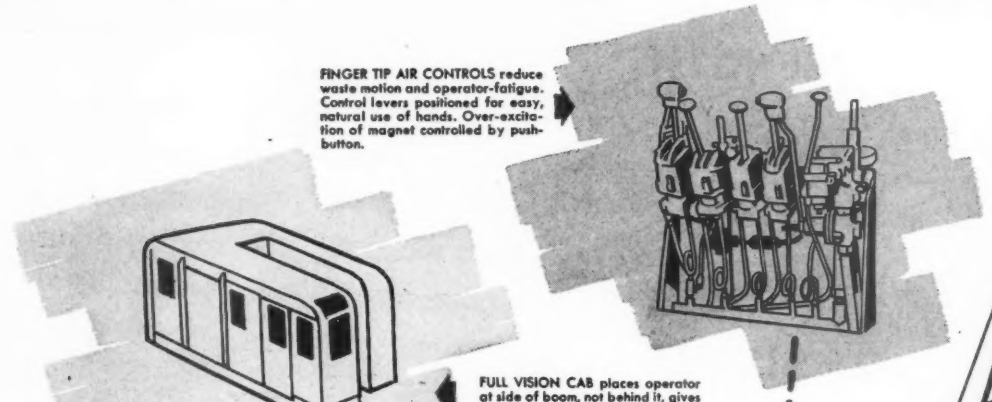
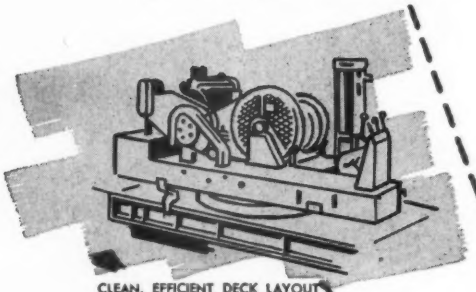
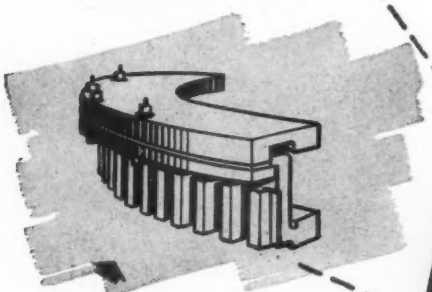


FINGER TIP AIR CONTROLS reduce waste motion and operator-fatigue. Control levers positioned for easy, natural use of hands. Over-excitation of magnet controlled by push-button.

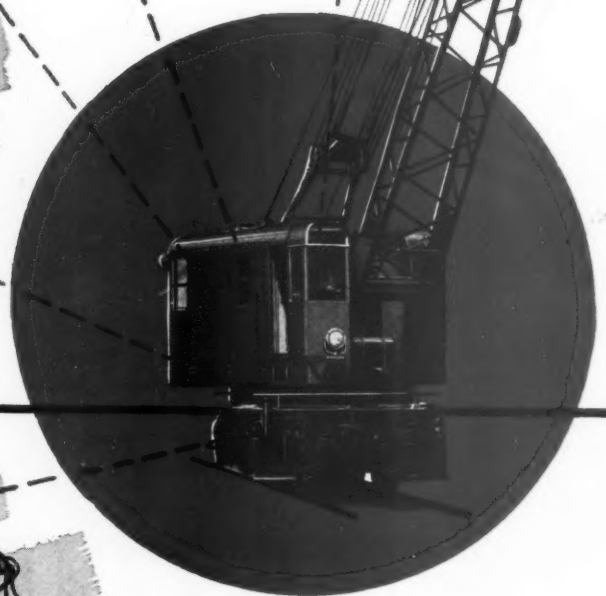
FULL VISION CAB places operator at side of boom, not behind it, gives him full view of load at all times.



CLEAN, EFFICIENT DECK LAYOUT makes maintenance easy. No pyramiding of deck equipment. All machinery enclosed. Welded, rolled steel full width deck.

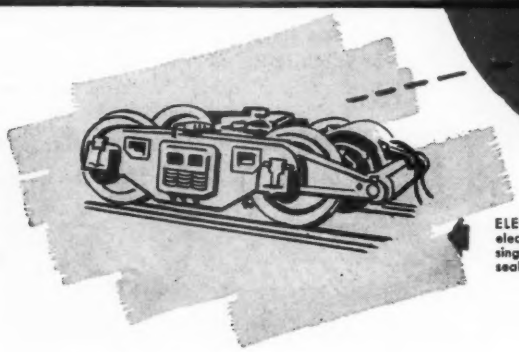


ENCLOSED ROLLER BEARING TURNTABLE uses American's exclusive, patented interlocking gib ring. Nine foot diameter turntable has 27 bronze bushed conical steel rollers —live, stable load-carriers.



Diesel Power to the Deck

Electric Power to the Trucks



ELECTRIFIED CARBODY has two powerful electric motors driving truck axles through single reduction spur gears and pinions sealed and running in oil.

..on the World's Toughest Jobs

THE AMERICAN

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A REVOLUTIONARY NEW LOCOMOTIVE CRANE

Scores of major wearing parts eliminated in the underbody . . . a clean, efficient deck, where maintenance work is a matter of minutes . . . smooth, powerful electric motors driving the wheels!

• • • That's the mechanical story of the AMERICAN DIESELECTRIC. But the economic story—established by years of testing on industry's toughest jobs—is even more important: *this crane will earn back its own cost in five years.*

In mechanical cranes, 50% to 75% of all maintenance work has been in the travel mechanism. By designing this clean, simple electrified drive, American Hoist engineers have actually reduced upkeep expense by as much as 25% to 50%!

The AMERICAN DIESELECTRIC is not a converted crane. It is new in every part, from trucks to boom point . . . specifically created for the best utilization of diesel-electric power. Obviously, this was not an "overnight" job of engineering.

Actually, the development of this crane has required about fifteen years. On-the-job tests have now run two to seven years in railroad and industrial operations. Names of users and detailed cost studies will be furnished upon request.

A new catalog, just off the press, gives full specifications and operating data. Mail the coupon below.

ASK THE MAN IN THE CAB!

● Even the world's finest locomotive crane can be no more efficient than its operator. For that reason, American Hoist engineers have given the DIESELECTRIC the most comfortable, orderly and ingenious cab arrangement ever created. The cab is forward of the main deck mechanism, to right of boom. Operator sits high and close to the boom at the best possible angle for guiding his load. Windows front, side and top permit excellent view even in cold weather operation. The cab is fully partitioned from machinery deck . . . clean, quiet and comfortable at all times. Controls are all air-actuated, and levers respond to finger-tip pressure, assuring maximum work output and minimum fatigue.

DIESEL-ELECTRIC LOCOMOTIVE CRANE. PATENT NO. 2083480. TOUCH CONTROL. PATENT NO. 2370858.

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INSULATING BOARD HAND SHEETS

By Robert V. Pazina

Fir-Tex Insulating Board Co.

Abstract

Insulating board handsheets have been used to show that stock quality varies the slope of the tensile-density curve and that tensile strength is a function of thickness. The latter relationship is apparently caused by a skin effect.

Introduction

Handsheet production should not be overlooked as a means of determining the usefulness of new or changed conditions in the production of insulating board. It is far too costly and time consuming to try every new idea or improvement on the actual board machine. In this way the handsheet is able to take the place of the pilot plant in some respects.

However, handsheets are of little value in routine testing as the time required for weighing the stock, forming the sheet and drying is too great to be of much benefit to the machine operators.

Insulating board handsheets vary considerably from paper mill handsheets. Paper mill handsheets are similar to the paper that is made in the mill being in the neighborhood of 0.010 inches in thickness. Insulating board handsheets are made from 0.25 inches up to 1.25 inches in thickness and are rectangular in shape, usually large enough so that a 12-inch by 12-inch sample may be cut from the handsheet. Common practice is to make a standard one-half inch handsheet.

The insulating board handsheet is made from a given weight of stock of known consistency. This stock is mixed with water with the aid of a mechanical agitator and introduced into the preformer or hand sheet machine. The handsheet machine consists of a box with a wire mesh across the lower end to catch and retain the fibre as the water is drained off. The mixed stock is poured into the handsheet machine and more water is added to reduce the stock to the desired consistency, then a quick opening drain valve allows the water to be drained from the pulp. A suction pump removes excess water after which the handsheet is removed and pressed in a hydraulic press to the desired thickness.

Some of the factors that may be determined through the use of handsheets are: tensile strengths, water absorptions, acoustical properties, ability to add other ingredients to the fibre, and properties of different types and sources of fibre. Also, comparisons may be made between different methods of refining.

To be of value the handsheets should be made under the same conditions and with the same procedure. It would be an aid to the industry if a standard method of producing handsheets were established. At the present each manufacturer uses a somewhat different system. This tends to prevent cross checking throughout the industry but it is not too serious as most handsheets are made for comparisons in only one plant and as long as the system of producing them remains the same and is logically sound the work seems to be satisfactory.

The author, who presented this paper at TAPPI meeting in Longview, Wash., Sept. 9 as entry in 1947-8 Shibley Award contest, open to young employes of pulp and paper mills in Pacific Coast states.

Variation of Tensile Strength With Thickness and Density

An interesting deviation in the tensile strength was noted in producing three-eighths and one-half inch building boards. When production was changed from one-half inch board to three-eighths inch board a decided rise in the tensile strength was noted. The reverse of this was true when the production was shifted from three-eighths inch board to one-half inch board. As the stock during these changes of thickness remained the same, it was assumed that some other factor was causing the difference in the tensile strength. The problem was to find what caused this change.

Machine production could not be shifted over the range of thicknesses and densities required without a great loss in production so handsheets were made out of like stock and tests were run on these.

Series of handsheets of varying densities and of the same thicknesses were made. When the results of these handsheets were plotted, definite lines were established for each thickness.

These handsheets were made from stock which can be defined in the following paper mill terms:

Percent Mullen 6.4.
Tensile (psi) 6.5.
Tear percent 22.2.
Freeness cc/1. 850.
Weight No. 130.
Thickness in. 0.040.

Tensile Density Charts

Tensile density curves for insulating board furnish can be plotted and fairly close approximations of machine results may be calculated from these curves, once the slope and the intercept are determined. Varying thicknesses of boards do not appreciably change the slope of the tensile-density curves but a minute change in thickness results in a major change in the intercept. On insulating board stock that was used in this work the equations held to approximately 20 pounds density board. From 12 pounds to 20 pounds the equations are straight lines. Above 20 pounds density the tensile-density curves seem to take a sharp upward swing. Further work is being done in an attempt to determine this cause. Below 12 pounds density, tensiles are so low that the results are very inaccurate. This is of little concern as most insulating boards are run between 12 and 20 pounds density.

The quality of stock and the amount of refining seem to both vary the slope of the tensile-density curve and its position on the plot. In this work thicknesses of one-quarter, one-half and three-quarters inches were used. The plot of the information gained from the handsheets gives a definite family of curves. Parallel tensile tests which are tests run parallel to the surfaces of the boards have no correlating information. Transverse tests in which a strip of board is loaded at the center gave some correlation but not of the same caliber as those of the perpendicular tensile tests.

To get accurate information from the tensile-density curve, the slope should be determined and this means that several handsheets should be formerd with varying densities and a constant thickness. Over a period of time the tensile-density curve gives information as to changes in quality of stock production. Sets of similar curves run at different times will shop changes in stock quality and refining.

Results

The results of tensile tests performed on handsheets of varying thickness and densities are shown on plot No. 1 and No. 2. The plots were made at three months intervals on mill stock. Plot No.

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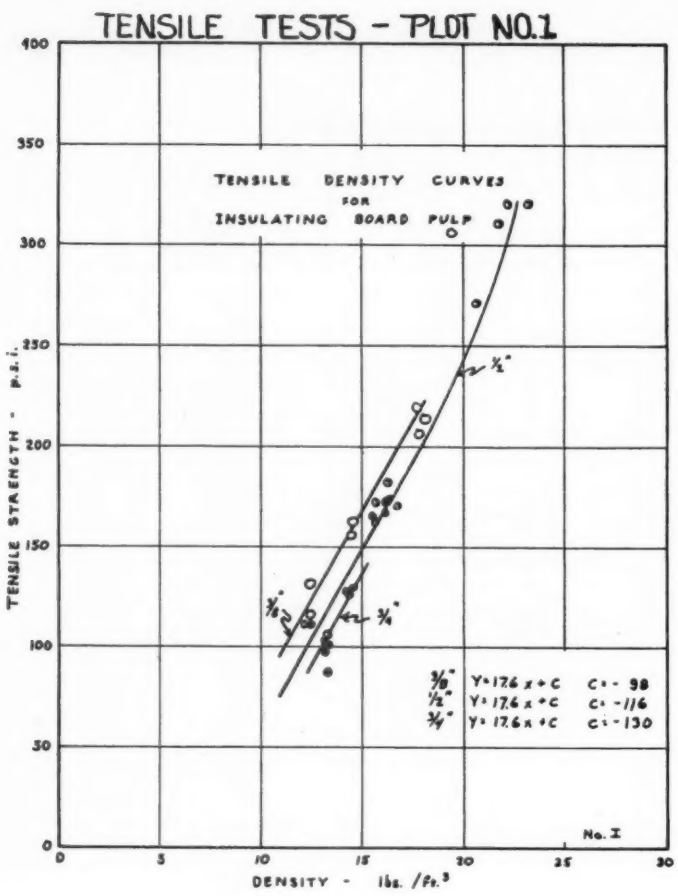
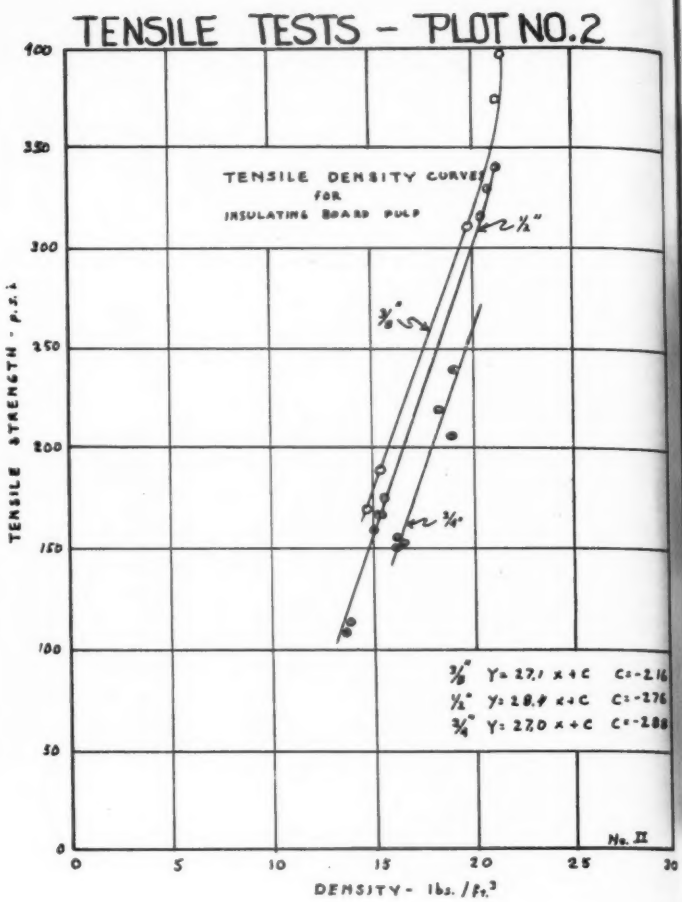

TENSILE TESTS - PLOT NO.1
TENSILE DENSITY CURVES FOR INSULATING BOARD PULP
TENSILE STRENGTH - p.s.i.
DENSITY - lbs. /ft.³
3/8" Y=17.6 x+C C=-98
1/2" Y=17.6 x+C C=-116
3/4" Y=17.6 x+C C=-130
No. I


TENSILE TESTS - PLOT NO.2
TENSILE DENSITY CURVES FOR INSULATING BOARD PULP
TENSILE STRENGTH - p.s.i.
DENSITY - lbs. /ft.³
3/8" Y= 27.1 x+C C=-216
1/2" Y= 28.4 x+C C=-276
3/4" Y= 27.0 x+C C=-288
No. II

3 of the transverse strength was made from the same stock from which plot No. 1 was made.

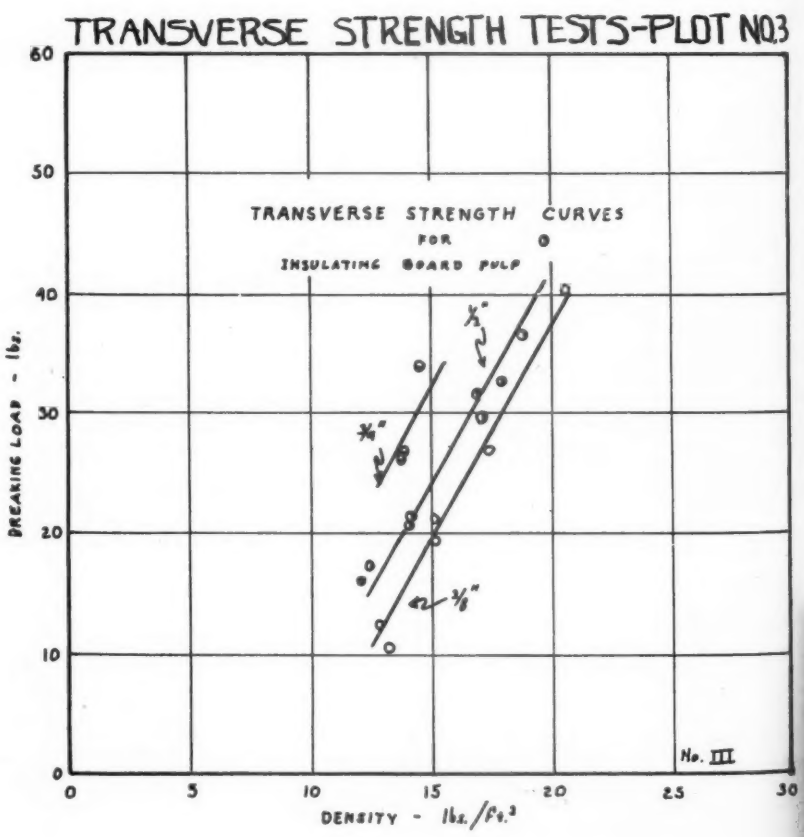
The tests sheets having all been made from the same stock and in the same method in this experiment, leads to the conclusion that there is a "skin effect' on the surfaces of the insulating boards. The tensile strength of this skin seems to be higher than that of the center of the board; thus as the boards become thinner the effect of this skin becomes greater. Other experimental work has shown that this skin effect becomes very pronounced at densities above 30 pounds and produces a board with very hard dense surfaces and a soft lightweight interior.

Acknowledgments

The work reported on in this paper was sponsored by the Fir-Tex Insulating Board Co., St. Helens, Ore. The paper mill tests on the stock were run by the St. Helens Pulp and Paper Co., St. Helens, Ore.

Summary

The tensile strength of insulating board is not only a function of the density but also of the thickness of the board and the skin effect. Handsheets may be used to advantage in an insulating board mill to gain knowledge of stock quality and board properties.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TRANSVERSE STRENGTH CURVES FOR INSULATING BOARD PULP
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MORE MURRAY BAY PICTURES

Last month we published a review of the New York-Canadian Superintendents convention held in September at Murray Bay, Que., with a number of pictures. Here are more pictures taken by PULP & PAPER at that meeting:

Left to right—Top row: H. A. HORSTMAN, General Dyestuff Corp.; BERT KASSING, N. Y. State College of Forestry, Syracuse; JIM ROGERS, J. J. Rogers Paper Co., Au Sable Falls, N.Y.; RALPH PRINCE, American Cyanamid Co.

Second row: RENE MONGEAU, Mongeau & Robert, Montreal; J. R. LESLIE, Howard Smith Paper Mills; ANDRE ROLLAND, Rolland Paper Co.

Third row: LEO RIOUX, Fraser Cos., Edmundston, N. B.; E. G. KIRBY, Price & Pierce, Montreal; JACK GRANT, Chemipulp Process, Montreal, and DOUGLAS JONES, Sec'y-Engineer, Tech. Section of Canadian Pulp & Paper Assn.

Left to right—Top row: H. E. CUNNINGHAM; W. DORNING, Dominion Engineering Co.; J. B. KELLY, Price Bros. & Co., Riverbend, Que.; WYATT JOHNSON, Sutherland Refiner Co.; HERTON CASTONGUAY, Manager, Lake St. John Power & Paper Co., Dolbeau, Que.

Second row: MURRAY BENNETT, Stebbins Engineering Co., Watertown, N.Y., and RAIMBAULT DE MONTIGNY, Technical Director, Rolland Paper Co., who spoke on cooperation between the equipment companies and the mills. A report of his talk was published last month—it was a frank criticism of some of the practices of equipment companies.

Left to right—Top row: J. B. KELLY, Price Bros.; W. E. BAILEY, Fort Orange Paper Co., Castleton, N. Y.; E. J. THOM, Manager of Pulp Division, Howard Smith Paper Mills; J. R. MacLAREN, MacLaren Paper Co., Glens Falls, N. Y.

Second row: L. D. CARNER, Lockport Felt Co., Newfane, N. Y.; G. R. HOLM, Derrico-Canastetta Inc.; BILL GIBSON, Shuler & Benninghofen Co., Hamilton, O.; FRANK DURKEE, F. G. Durkee Co., Syracuse, N. Y.

New B & W Welder For Pressure Plates

A new and unusual type of welder for the manufacture of composite or clad plates used in pressure vessels and a new variation of the slabbing process for bonded composite plates were described by O. R. Carpenter, Babcock & Wilcox engineer before an oil industry group of the American Society of Mechanical Engineers in Houston, Tex., Oct. 8.

Believed by the company to be of a type heretofore not used for seam welding applications, the operation of the new welder is characterized by more consistent welding voltage, considerable power savings, and higher current flow into the work for shorter periods, he said. It helps overcome the problem of shunt currents and contact resistance. In the new mechanism two rotary type transformers are used in contrast to the conventional transformer which is stationary, and a pulsating current to the weld is obtained by means of a pulsation timer.

Mr. Carpenter outlined the two successful methods in general use today in the manufacture of composite plates. In the slabbing method the stainless cladding material and the steel base plate are assembled into a sandwich with the stainless material protected on its bond side by plating with either nickel or iron. The heat and pressure of the subsequent rolling operation forms the bond. In the resistance welding method a number of alloy sheets are attached to a steel plate by means of either spot welds or over-lapping spot welds, commonly called seam welding.

In seam welding, the form of resistance welding used by Babcock & Wilcox Co., the clad layer is usually made up of three layers consisting of two of the alloy material and one of pure nickel. The nickel helps prevent carbon migration and increases the total area bonded to the steel. Nickel will bond to steel at a relatively low temperature, he stated, and it has been shown that along the edges of the fused area of the resistance weld, a region of nickel is full bonded to the steel and alloy. Croloy bonded plates may be formed and handled without many special precautions, Mr. Carpenter said.

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Some Observations on the

EFFECT OF SULFUR DIOXIDE CONCENTRATION ON THE RATE OF SULFITE PULPING

By William Pittam

The function of free SO_2 in the thermodynamics of the sulfite process is fairly well understood by everyone, yet actual proof in the form of experimental data is meager.

The investigation was undertaken to collect some facts on the rate of pulping as it is governed by the sulfur dioxide concentration in the digester. It has taken the form of a series of cooks conducted at Longview in the experimental digester of the Research Department of the Pulp Division of the Weyerhaeuser Timber Company.

This digester is a stainless steel vessel of 40 cubic feet capacity, holding 285 oven-dry pounds of chips, which were obtained from the regular mill supply. Cooking acid was taken from raw acid storage. In this case, circulation in the digester was from a stainless strainer in the bottom cone, through a pump and four-pass heat exchanger, and back into the digester through a ring-type distributor above the chip mass. Condensing steam at 135 pounds per square inch gage was used as the heating medium.

Several series of cooks were made, at 120, 110, 100, and 90 pounds per square inch gage maximum cooking pressure. The first series was cooked with an SO_2 ratio equivalent to an initial liquor analysis of 10% free SO_2. The second series was identical to the first except for a change to 8% free SO_2.

All other cooking conditions were kept as near the same as was possible, and had the following values:

Maximum Temperature—140° C.

Time to Maximum Temperature—5½ hours.

Liquor Ratio—4½ lbs. /lb. of O.D. Wood.

Combined Aatio—0.05 lbs./lb. of O.D. Wood.

Blowdown Period—1¼ Hours.

Blow Pressure—30 psi gage.

Although the liquor theoretically was pumped at 10% and 8% free, pressure linntations of the experimental accumulator made it necessary to pump liquor of a lower anlysis and to make up the difference by adding liquid sulfur dioxide to the digester. In order to insure uniformity of chemical ratios throughout the experiment, the weight of sulfur dioxide added to the first cook of each series, both as liquid dioxide and in the cooking liquor, was converted to "SO_2 Ratio," or pounds of sulfur dioxide per pound of oven-dried chips in the digester charge. In all subsequent cooks of a series, regardless of the change in chip moisture and accompanying change in the pounds of liquor pumped, this SO_2 ratio was used.

The hot cooking liquor was introduced from the accumulator into the bottom of the digester at 80° C. Air was simultaneously relieved from the top until sulfur dioxide was detected by smell. At that instant the relief was stopped and the remainder of the liquor was pumped into the digester against pressure. In this manner it was assumed that most of the air in the chips was displaced and that the quantity of inert gases present in the digester in each cook was approximately the same. The maximum cooking pressure then became a measure of the concentration of the sulfur dioxide in the cook as the partial pressure of water, air, and combined sulfur dioxide were independent of pressure and dependent on temperature only. Since the maximum temperature in all of these

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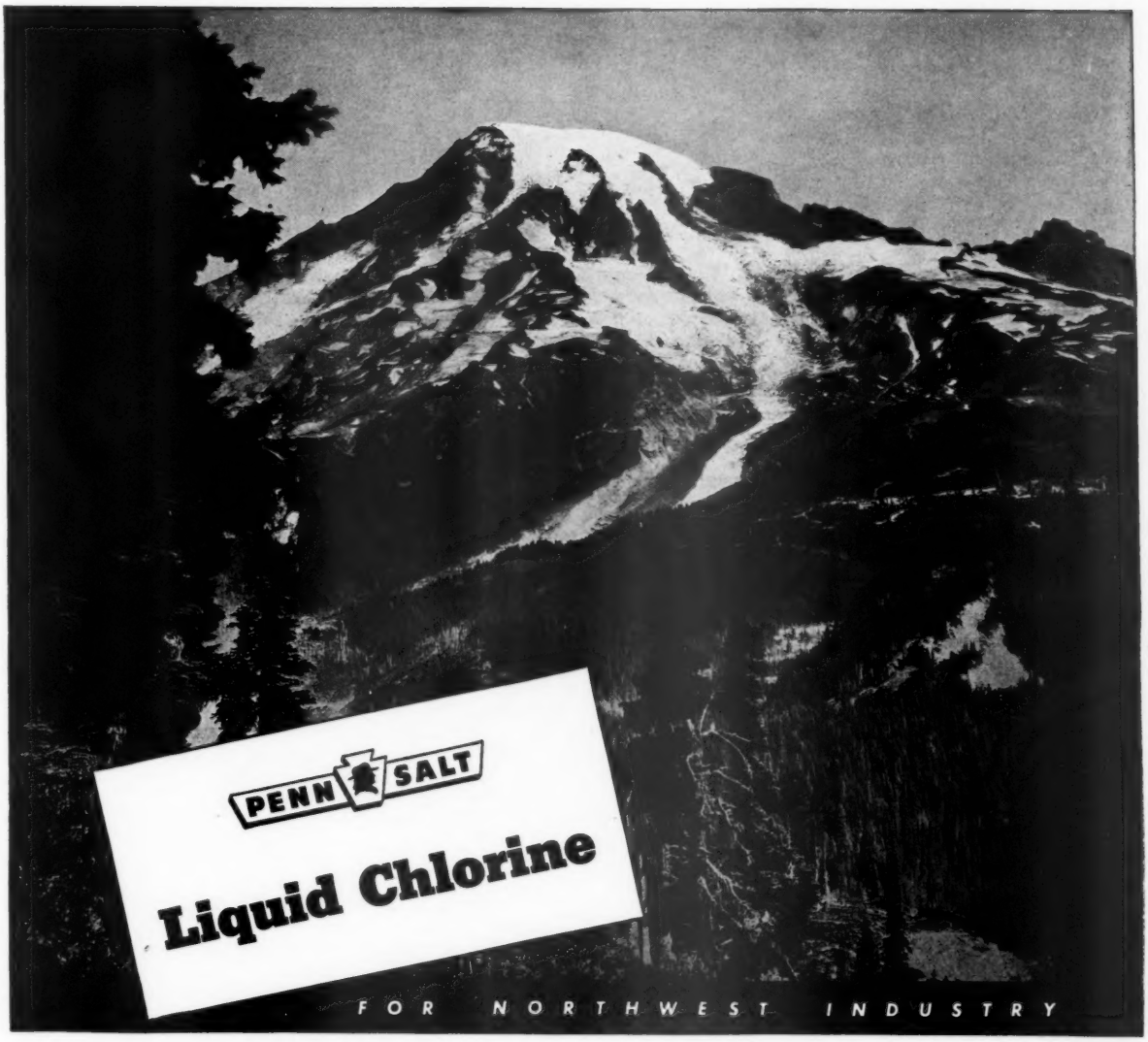

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Author of this paper, WILLIAM PITTAM, who is Chemical Engineer in Weyerhaeuser Timber Co.'s Pulp Division at Longview, Wash. Mr. Pittam was winner of the 1945 Shibley Award for the best paper of year by a young operations man in mills of the Pacific Coast. His prize-winning paper was on production of tannin from hemlock bark.

cooks was 140° C, these partial pressures were assumed to be constant.

There was no side relief as steaming was indirect, and the only change in the digester's contents during the cook was caused by relieving to control the maximum pressure. A temperature schedule was adopted that brought the digester to maximum at 5½ hours.

Figures 1, 2, and 3 are plots of the summarized results of this investigation.

In figure 1, each curve illustrates the effect of cooking at constant maximum pressure, of varying the time, and of measuring the result in bleachability. Secondly, by presenting all of the curves on one plot, it is shown that each individual curve is offset from its neighbors by a period of time, which is a measure of the rate of cooking at that particular pressure. It is interesting to note that the curves crowd to the left on the time axis as the pressure is increased, thus indicating a limit of the practicability of raising the pressure to shorten the time. With these cooks, the practical limit was 120 pounds per square inch, because the maximum temperature and blowdown time were reached simultaneously.

In figure 2 is shown a plot of the effect upon bleachability of cooking at a constant time but varying the maximum pressure. The 8% curve seems to average the two 10% curves. This would indicate that a reduction of free sulfur dioxide from 10 to 8% would have the same effect as shortening the cook ten minutes.

Figure 3 is still another way of presenting the results of the two series. The ordinate of the intercept of the 5% bleachability line and each pressure curve of figure 1 is plotted against pressure.

The equations of these two curves are approximately:

$$P_{10}\% = \frac{387{,}700}{10^{0.0101\ T}} + 80$$

And:

$$P_{8}\% = \frac{16{,}588{,}000}{10^{0.01404\ T}} + 86$$

Where T is cooking time and P is cooking pressure. By using these formulas, the cooking time can be calculated, with a fair degree of accuracy, for any pressure desired.

The equations, because they apply only to special cases, are of value only in showing that a mathematical relationship exists between the rate of cooking and digester pressure.

In summarizing the evidence presented, it has been shown that the rate of cooking is directly affected by sulfur dioxide concentration, and that when the rate of cooking is integrated to elapsed time, the value of the constant can be determined mathematically.

Although the concentration of sulfur dioxide exerts a dominant influence in the rate of cooking, it has no effect upon the quality of pulp produced. No significant changes in either the physical and chemical properties of the pulps could be detected. A slight tendency toward lower screenings at the higher pressures was noticed.

It is unfortunate that while cooking time can be materially shortened by the use of high sulfur di-

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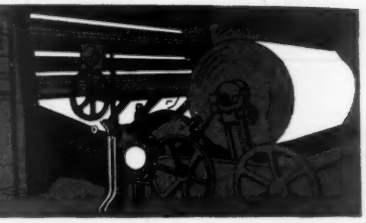

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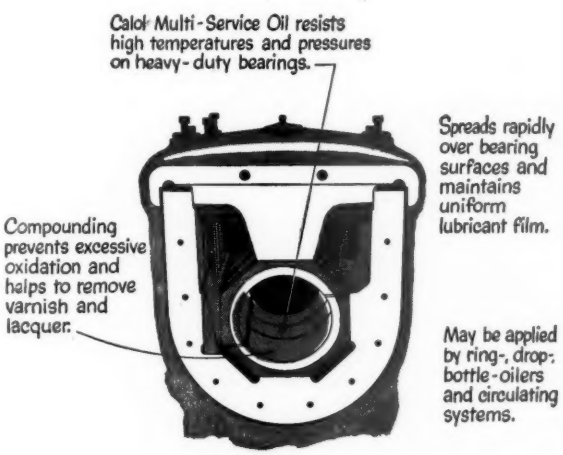
Where rapid separation from water is not required, Calol Multi-Service Oil may be applied satisfactorily by oil circulating systems. It is also applied by ring-, drop-, bottle-oilers and by hand oiling.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This drawing prepared with cooperation of Chicago Pneumatic Tool Co.

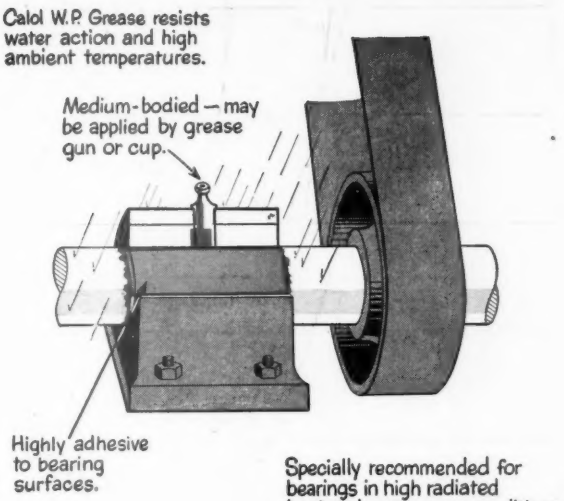
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FIGURE 1

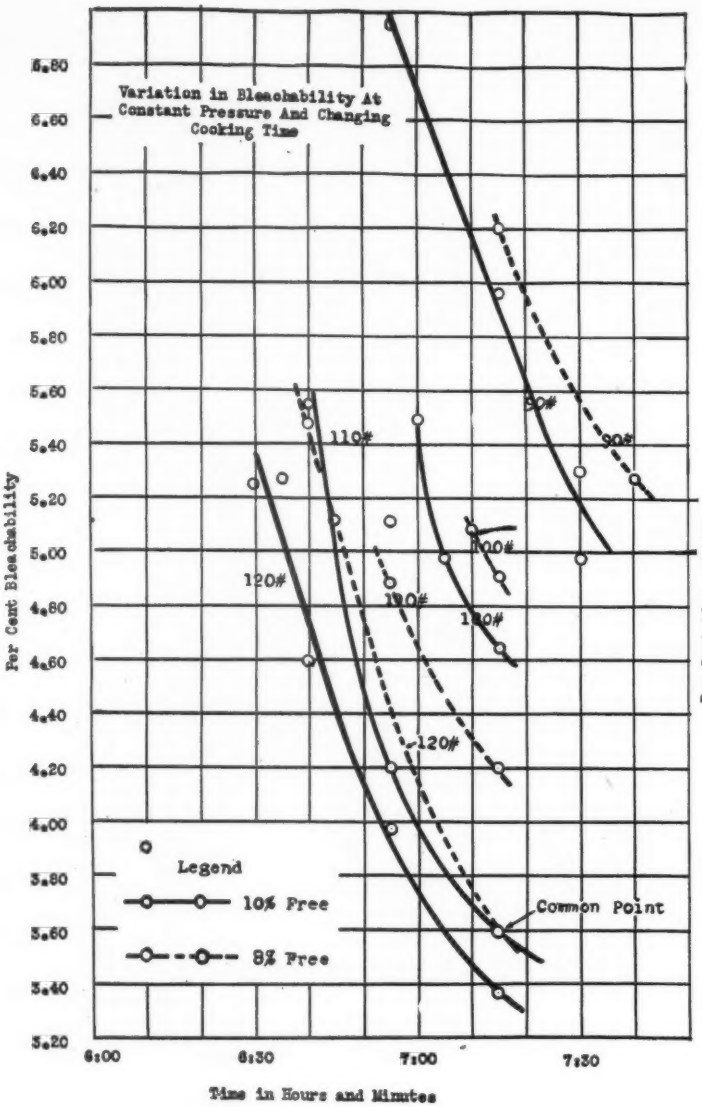
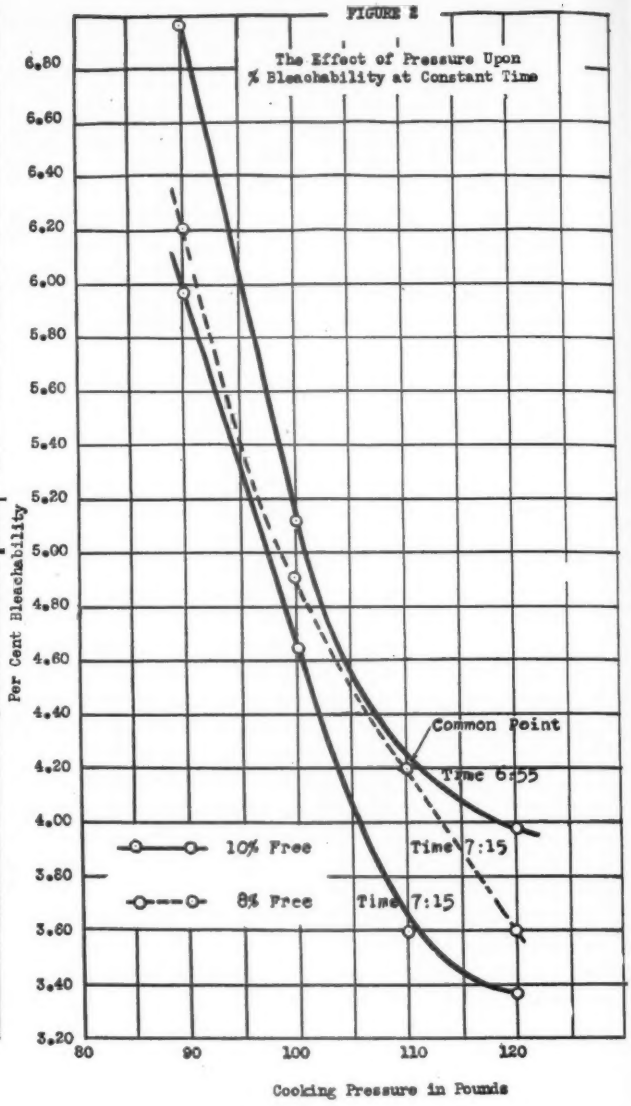


FIGURE 2

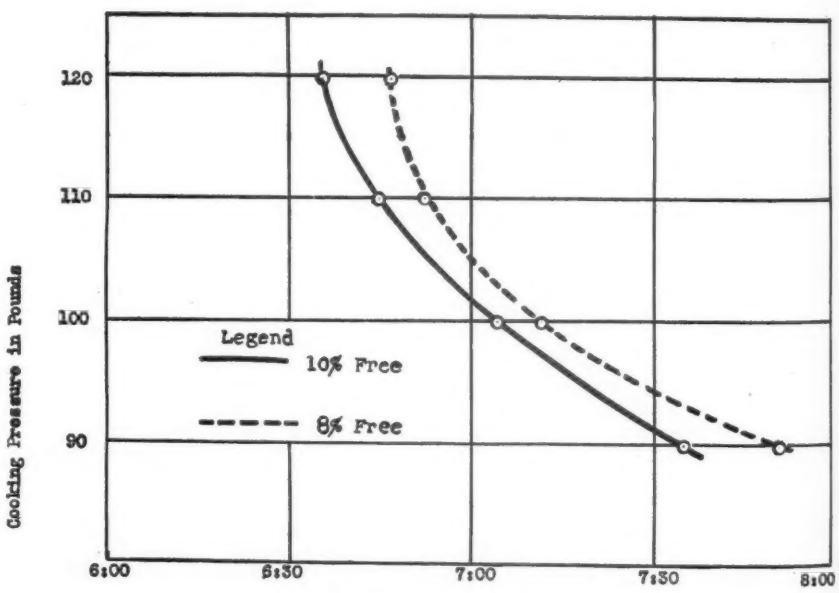


oxide concentrations, most present day digesters cannot stand the pressures this use requires.

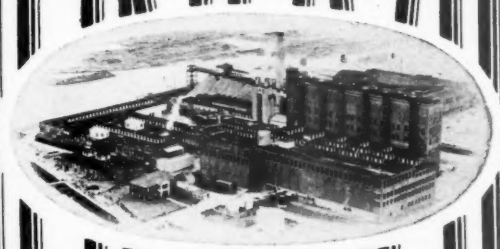
There are also other discouraging factors in the use of high free. The refrigerating effect of boiling off large quantities of dissolved gas lowers the temperature of the digester and contents to such an extent that greater amounts of sulfur dioxide are retained in the blow liquor and, consequently, are lost to the sewer and vomit stack. In addition, keeping accumulators down to reasonable pressures requires employment of relief coolers. When the relief has to be cooled, and colder liquor pumped to the digester as a result, more steam has to be used in the heating cycle. This situation forces an expensive cooling and heating operation to be used without any over-all gain in entropy.

Perhaps low liquor ratio cooking with indirect steaming, blowdown to atmosphere, and other developments now on the horizon of sulfite pulping, will lead the way to a solution of these problems.

FIGURE 3
The Influence of Pressure On Cooking Time At Constant Bleachability



SOUNDVIEW



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Financial Outlook Is Okay for CANADIAN NEWSPRINT

Has the Canadian newsprint industry—its greatest industry—reached the peak of its economic expansion?

Not a few people in Canada and elsewhere have been apt to look back on the history following World War I and see certain parallels in the present situation, but is there any justification for the fear that capacity production and higher prices today will be followed by price collapse and years of disruption, even bankruptcy, such as followed in the wake of the newsprint boom in the early 1920's and thereafter?

One of Canada's leading investment houses, Dominion Securities Corporation, Ltd., recently undertook a survey and came up with the conclusion that there are no solid grounds for anxiety. The survey points out that there are vastly different conditions prevailing today from those that influenced the industry after World War I, as may be seen from the are likely to be different, too.

Two factors are completely different, the investment house emphasizes. One is the price trend itself; the other is the possibility of expansion. The price trend of World War II has followed a different pattern from the trend that followed World War I, as may bet seen from the figures of comparative years in each period, shown in the following tables. The prices shown are the average yearly prices for delivery at New York; the index figures are based on the prices in the first year of each war taken as 100.

Newsprint Called U.S. "Political Football"

"Newsprint is being made a political football in Washington, D. C.," said William L. Daley, Washington representative of the National Editorial Association, at a recent meeting of the New Jersy press association.

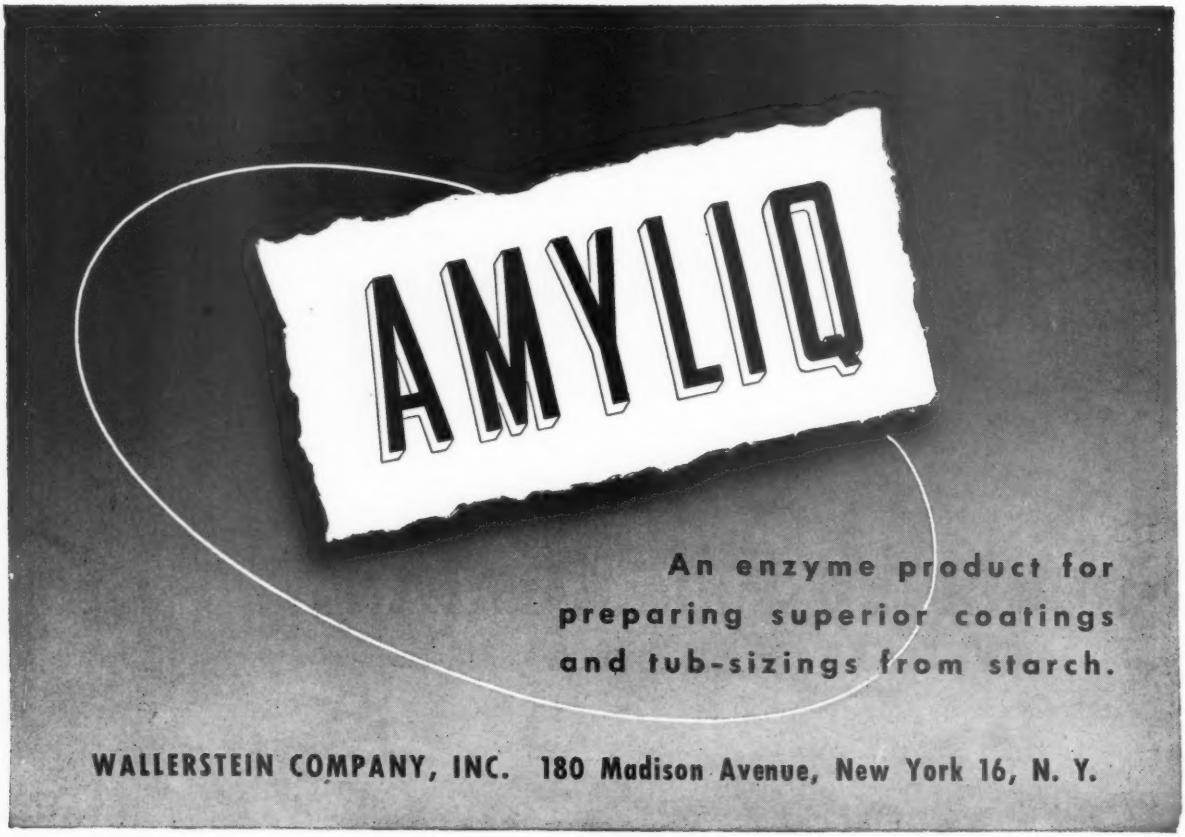
He said an NEA questionnaire to 6,000 papers revealed that many weeklies in Illinois, Iowa, Missouri and California and other states are "in distress." Another speaker said small dailies and weeklies get none of the 23% increase in newsprint production in 1946, which all went to large dailies.

War I	*Price*	*Index*	*War II*	*Price*	*Index*
1914	$42.50	100	1939	$50.00	100
1915	42.00	99	1940	50.00	100
1916	51.78	122	1941	50.00	100
1917	63.78	150	1942	50.00	100
1918	64.30	151	1943	54.66	109
1919	80.15	189	1944	58.00	116
1920	112.60	265	1945	60.25	121
1921	111.45	262	1946	72.25	145
1922	75.00	176	1947	88.50*	177
1923	81.80	192	1948	.....	.....
1924	80.80	190	1949	.....	.....

*Assumed average for 1947. At $90 the index is 180.

It will be noticed that, in the World War II period, there has been no sharp and violent rise comparable to the figures of the World War I period. In the fourth year of World War II, for example, the index remained at 100 against 150 in 1917, the comparable year of the previous conflict. Against the sharp index peaks of 265 and 262 in 1920 and 1921, the index figures for the comparable years of 1945 and 1946 were only 121 and 145.

The index figure of 177 (or 180) in 1947 is still substantially below the index figures which prevailed throughout the six years of 1919-21, with the single exception of 1922. In the existing 1947 price level, and in the trend which has pre-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ceded it, there is nothing to attract speculative capital for new mill expansion as there was in the World War I period.

The analysis shows that there is a sharp difference between the two war and post-war periods regarding the relative possibilities of expansion. At the end of the first war the Canadian industry had a total capacity of less than 800,000 tons a year (total Canadian production in 1918 was less than 750,000 tons) and there were immense forest areas, as well as hydro-power resources, awaiting development which provincial governments were eager to encourage. Today the Canadian industry has an annual capacity of 4,349,700 tons (over five times its World War I figure) and there are not today as many forest and power sites suitable for new mill construction, or feasible for new mill development at present costs and prices. The most economical and effective expansion, according to the survey, is today in the form of improving existing mills. This is currently taking place to the extent of many millions of dollars expenditure.

"From a Canadian standpoint," adds the survey report, .'there appears to be nothing in the present newsprint price situation to cause concern. There would be ground for anxiety if Canadian newsprint sellers were repeating the error of the World War I period by charging prices which would promote reckless capacity expansion, but this is clearly not the case . . . There is, on the contrary, reason for Canadian satisfaction in the evidence that Canadian sellers are following a restrained course, but are at least, for the first time in many years, beginning to derive respectable profits from newsprint operations and from the use of public forest resources thus involved."

As far as investors are concerned, it is pointed out that payment of dividends by Canadian newsprint mills is so unusual as to excite comment. The two largest wholly Canadian newsprint producers are Consolidated Paper and Abitibi, both of which have substantial earnings from products other than newsprint. Consolidated paid the first dividend in its history last year; its shareholders have received a total of $1.50 a share in fifteen years. Abitibi emerged from fourteen years of receivership only last year and has not yet paid a dividend on its common shares.

Answering criticism of the industry from publishers, the survey states: "The newspaper business, as well as the newsprint industry, would be better off if newsprint were more widely recognized as an ordinary commodity, like wheat, sugar, coal, steel, rather than mistaken as something belonging to the freedom of the press. Most magazine publishers, for instance, deal with their questions of paper supply in an ordinary business way; they do not become outraged nor begin to imagine plots against the state when paper companies manage to make money. Some newspaper publishers, however, seem to be under a delusion that the newsprint industry is a sort of public utility to be operated for their exclusive benefit. They seem to think that they have a divine right to unlimited paper supply at cost, or at less than cost, and that any departure from this condition is a violation of sacred rights . . .

"The delusion seems to have led some publishers into a paradoxical position in which they complain about newsprint price increases but, at the same time, call for expansion of newsprint capacity and seem to think that Canadians are acting badly by not finding more forests and building more mills. This is indeed an example of wanting to have one's cake and eat it too.

"If newspaper publishers want low newsprint prices they must be prepared to expect diminished production; the flight from newsprint by United States mills makes this painfully clear.

"If increasing supply is their main desire, then publishers must be prepared to pay prices which will stimulate production and maintain a healthy manufacturing industry . . . It is clear that newsprint consumers cannot have both low prices and expansion of commercial supply; one objective contradicts the other."

There is no mistaking the fact that toduay the Canadian newsprint industry is prospering. All the financial reports so far issued bear striking testimony to that. During the first five months of 1947 Canadian mills operated at 101 per cent of capacity. Profits so far this year are good. Three companies which so far have reported first quarter earnings show a marked increase over last year. Here is how first quarter profits compare with those of 1946:

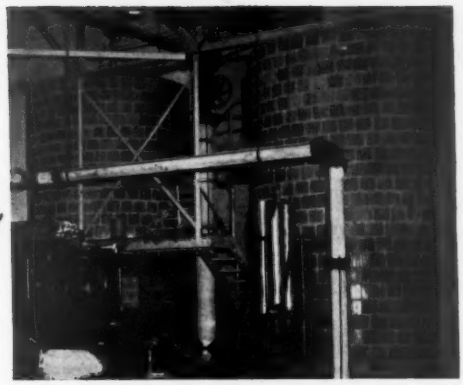
Company	*Net 1946*	*First Quarter 1947*	*Pct. Full Yr. 1946*
Great Lakes Paper	$1,063,147	$ 321,550	30%
St. Lawrence Paper exclusive of dividends from Lake St. John)	789,504	393,888	50%
Lake St. John	872,000	361,281	41%
	$2,722,853	$1,076,719	40%

However, the Canadian stock market does not appear to be too optimistic. If the assumption that profits in the newsprint industry will run approximately 60 per cent above last year is near the truth, the price of common stocks of most paper companies is low, remarks Financial Post, Toronto. On this basis Abitibi is currently selling for 3½ times earnings; Price Bros. about 4½; Consolidated Paper 5½ and Great Lakes around 6½ times estimated 1947 earnings.

Views of Industry Leaders

The market is discounting several factors, and one of them is costs, Elliott M. Little, president of Anglo Canadian Pulp & Paper Mills and one of the industry's outstanding executives, states that recent rise in mill wages is equivalent to $3 a ton. Wood wages are up to $4 a ton over 1946. Freight increases total close to $1.50 a ton. In addition, this year's heavy rains have increased many companies' wood costs.

Another factor is the history of the market, largely represented by flunctuating demand in the United States. U. S. per capita consumption has climbed through boom and depression, but it has also had some setbacks. In 1928 it was about 225 pounds; five years later it was down to a little more than 150 pounds. Again in 1937-38 it took a drop from



Stebbins at

Westminster Paper Company

When modernizing and doubling the capacity of the Westminster Paper Company Stebbins glazed hollow tile was used to fabricate the Hydrocycle tanks and the machine chests. Stebbins also tile-lined the paper machine pits.

If modernizing, increasing capacity, or designing a new mill, consult Stebbins regarding lining or tile tanks.

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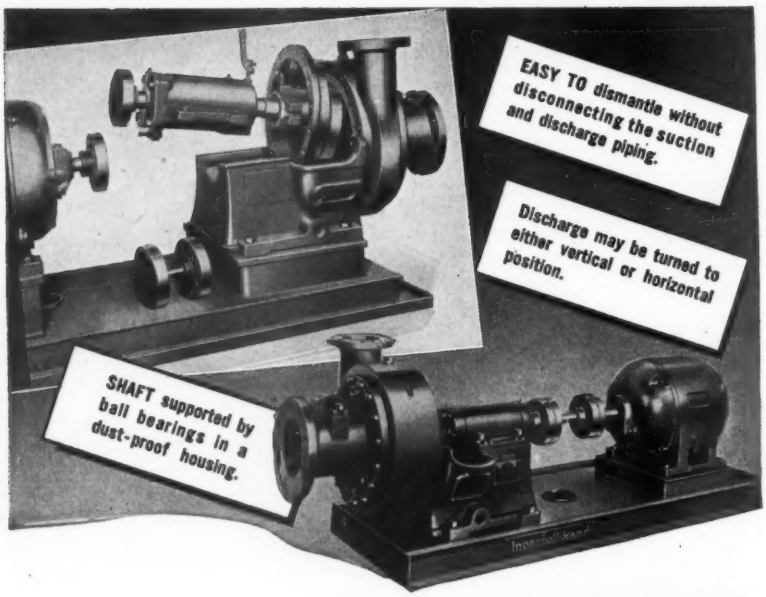
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I-R Vertical stock pumps are recommended for situations where space is at a premium or where suction conditions would not be favorable for the horizontal type.

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Nopco Booklet

A new edition of its informative booklet "Interpretation of Analysis for the Layman" has been released by Nopco Chemical Co. This 40-page booklet contains much information helpful to those working with industrial chemicals. Free copies may be obtained from Nopco Chemical Co., Harrison, N. J.

250 pounds to 210 pounds. This year it is close to 350 pounds.

L. J. Belnap, president of Consolidated Paper, has said that only a major recession would alter the status of the newsprint industry in operating at maximum capacity. Other newsprint men have said that a 10 to 15 per cent slump in advertising lineage would not affect the industry, because about that amount of advertising is now getting into papers now anyway because of newsprint shortage.

Nor would newsprint prices likely to decline at once in the event of a general recession, according to the reasoning of men close to the industry's economy. They point out that the present $90 a ton price is still far behind the commodity price averages (231 for general commodities compared with only 186 for newsprint).

Newsprint is also lagging below the relative price levels of other pulp and paper products. Newsprint continues to be the least profitable and attractive of any of the main pulp and paper products. Last year, for example, newsprint manufactured by Canadian International Paper Co. represented 26% of the total tonnage output of the company but only 18% of its gross revenue and less than 7 per cent of its net profit.

All factors considered, it would seem that the Canadian newsprint industry is today on a sounder basis than ever before, even though the present expansion may be close to its peak, and that even should there be a widespread business decline, the industry is well prepared to meet the shock.

Some Equipment Tests Being Made—One Is Abandoned

Under auspices of the Canadian Pulp and Paper Association, certain types of mill equipment are being tested as to comparative performance at certain Canadian mills.

However, an attempt to test competitively the pulp refining or preparation machines and stock treatment machines bogged down, when only two of about a dozen manufacturers agreed to "enter" their equipment. There had been three, but one of these recently withdrew. The scheme was then abandoned. The objection of some of the manufacturers was that the test would have to be made under just one rigid set of conditions; namely, those conditions that prevailed at the St. Jerome, Que., mill of Rolland Paper Co. The scheme was to have all the machines undergo trials for one month at that mill.

It is reported that comparative tests of consistency regulators will be carried out at the Hull, Que., mill of the E. B. Eddy Co and of pulp dirt removal equipment at the Beauharnous mill of Howard Smith Paper Co.

BEDFORD PULP & PAPER CO., Big Island, Va., a unit of National Container Corp., New York, has a new name now—National Container Corp. of Virginia.

Management-Labor Safety Conferences Planned

Again this year the AFL unions and the Pacific Coast Association of Pulp & Paper Manufacturers will join a series of joint management-labor safety conferences. The first conferences of this kind in any major industry were held by these two groups a year ago in the Pacific Coast states.

The first this year will be Nov. 6-7 for California mills at the Mayfair Hotel in Los Angeles. For Oregon mills, the conference will be held in Salem in December and in Olympia, Wash., for mills of that state in January.

Again John Sherman, vice president of the International Brotherhood of Pulp, Sulfite and Paper Mill Workers, and Otto Hartwig, general safety director for Crown Zellerbach, will be the joint chairmen at all meetings. This time the unions and mill supervisors will discuss actual accident frequency and severity rates, gathered in questionaires, and the use of the National Safety Council formula in these matters will be discussed.

Sidney Grimes, assistant secretary of the Manufacturers Association, is serving on arrangement committees for all three state meetings.

A SPECIAL EDITION of Thomas James Cobden-Sanderson's "The Ideal Book," regarded by many craftsmen as the perfect embodiment of the best in typographic design, illustration and calligraphy, was recently mailed to a select list of printers, advertising agencies, and public relation counsels from coast to coast by Ecusta Paper Corp., Pisgah Forest, N. C.

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Sierra Paper Co. Moves To New Phoenix Quarters

The Sierra Paper Co., representing the Butler Paper Co of Chicago, will occupy new headquarters in Phoenix, Arizona, on Nov. 15. David Hartline, manager in Phoenix and a resident of that city all his life, has directed building of a new division quarters occupying 10,000 sq. ft. at 7th Ave. and W. Buchanan.

Earlier this year, the Sierra Paper Co. opened its first office in Phoenix. T. F. O'Keefe is vice president and general manager of Sierra Paper Co., at 4355 Fruitland Ave., Los Angeles, Calif.

Newsprint Shortage

A serious shortage of newsprint in the U. S. because Canadian and Scandinavian mills will find it more profitable to send other grades of paper is predicted by George Olmsted, Jr., of S. D. Warren & Co., chairman of the Bookpaper Manufacturers' Association.

Swedes Will Import U. S. Machines and Processes

Folke Setterwall, managing director of Swedish Overseas Corp, A. B., Stockholm, Sweden, was in New York late in September on behalf of this new company which has been formed for the eventual importing of U. S. machines and methods in the Swedish pulpwood and timber industries. During his stay he visited pulpwood logging operations north of New York, and investigated future possibilities with machinery and equipment firms.

Mr. Setterwall told PULP & PAPER that extensive practical research is now going on in Swedish woodlands toward the further mechanization of logging. Shortage of wood and reluctance of labor to take jobs in the forests has made this survey imperative, he said. Mr. Setterwall is acquainted in the pulp and paper industry here through his former association with the American Heat Reclaiming Corp, New York.

Power Saws for Norway

Erling Angel Jersin, Oslo machine man, flew out to Vancouver, B. C., recently and placed an order for $200,000 worth of power saws and parts with Power Machinery Ltd. It is the first time that power saws have been made available in substantial quantity for Norwegian loggers, and Mr. Jersin hopes that additional orders will be placed.

He believes that there is a potential market for 6000 power saws in Norway in lumber and pulp and paper industries.

New Coated Production
STARTS IN CANADA

On-the-machine coated book paper of a type not previously manufactured in Canada is now being produced by Provincial Paper, Ltd., at its Port Arthur, Ontario, mill.

The paper will be marketed under the trade name of Thriftcoat Process Enamel, and it is being generally distributed for the first time this fall.

The process used is that developed and patented by the Consolidated Water Power & Paper Co. in the United States. Provincial Paper, Ltd., is the Canadian patent licensee. So far as known this is believed to be the only comparable installation in prospect in Canada. It is the same process which was introduced for the first time on the Pacific Coast when Crown Zellerbach Corp. started up its new No. 6 machine at West Lynn, Ore., in July.

The coating process is located between the wet and dry end of the paper machine and is applied on the paper machines to both sides of the sheet as a continuous and integrated part of its manufacture. This particular process was developed by Peter J. Massey, now resident manager of the Bryant division of St. Regis Paper Co., in Kalamuazoo, Mich., several years before the war, when he was with Consolidated at Wisconsin Rapids, Wis. George W. Mead, president of Consolidated, engaged Mr. Massey and gave him full support in his experiments.

The process permits the sale of first class coated papers for publishing and commercial purposes at close to the price of uncoated S.C. papers. It is a high speed mass production process of fast ink-drying paper, thus meeting the demand created by invention about 12 years ago of high speed rotary heat set presses.

Cost of the installation at the Port Arthur mill ran to approximately $600,000.

Ultimate productive capacity to be reached early in 1948, when installations are completed of all ancillary finishing equipment, is estimated to be about 27,000 tons. This will provide a surplus for export over estimated domestic needs in Canada.

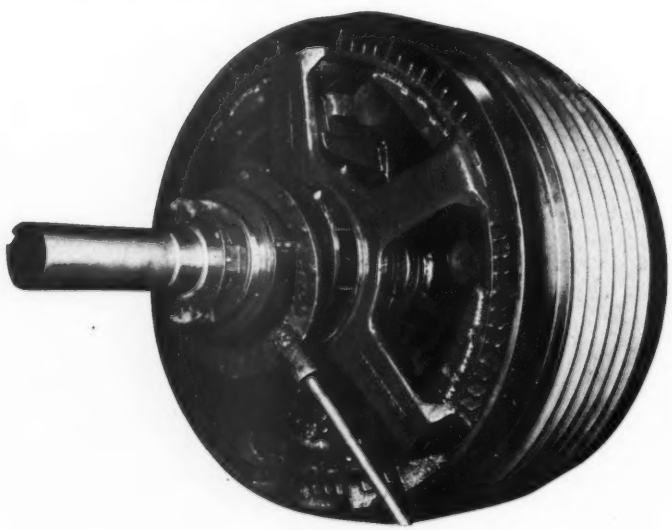
Provincial Paper, Ltd., is a subsidiary of Abitibi Power & Paper Co., headed by D. W. Ambridge. President of Provincial is S. F. Duncan, with W. H. Smith vice president, W. S. Barber, secretary-treasurer, and A. P. Jewett sales manager. E. L. Goodall is manager at Port Arthur.

Provincial operates mills at Geirgetown, Milles Roches and Thorold, all in Ontario, as well as at Port Arthur.

JOE E. STEVENS, Tour Foreman in Sulfite Department of The Northwest Paper Co., Cloquet, Minn., is $500 richer for thinking up the prize-winning name for a new pulping machine. No doubt, Joe can use the "half grand"—at 36, he's father of two boys and two girls. "The Jones Pulp-Master" is the name he picked for a one-ton capacity machine which disintegrates pulp or waste paper for further refining. The machine is made by E. D. Jones & Sons Co.

SWEDEN has experienced its warmest summer since 1811. Water level in several of the big rivers is the lowest in the memory of man. It is estimated that three million logs, destined for the saw mills and pulp mills along the coast, will have to be left on the river banks until there is sufficient water to float them downstream.

The Pulley with the Pull that Pays---



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